

THE MARINE CORPS GAZETTE



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VOL. XVIII. NO. 1

MAY, 1933

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The Marine Corps Association

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CONTRIBUTIONS—The GAZETTE desires articles on any subject of interest to the Marine Corps. Articles accepted will be paid for at the GAZETTE'S authorized rates. Non-members of the Association as well as members may submit articles. In accepting articles for publication, the GAZETTE reserves the right to revise or rearrange articles where necessary.

All communications for the Marine Corps Association and THE MARINE CORPS GAZETTE should be addressed to the Secretary-Treasurer, Marine Corps Association, Headquarters, U. S. Marine Corps, Washington, and checks made payable to the same.

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The Marine Corps Gazette

WASHINGTON, D. C.

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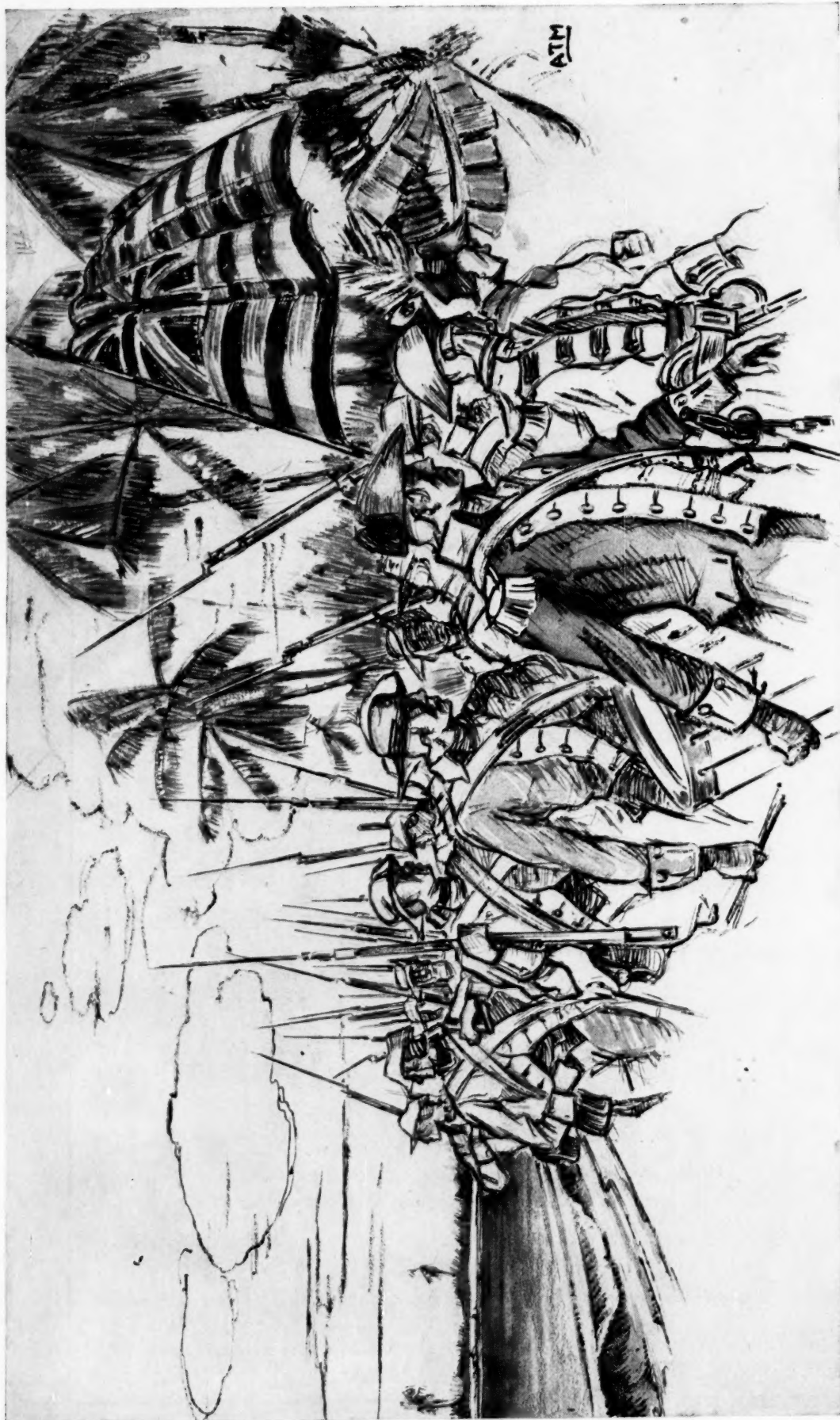
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THE FIRST AMERICAN FLAG OVER FOREIGN SOIL

On March 3, 1776, 270 Marines and 50 Sailors under command of Captain Samuel Nicholas of the American Marines landed from ships of the squadron of Commodore Esek Hopkins on New Providence Island, Bahamas, W. I., and captured Nassau and its defenses. The flag they carried was the Grand Union Flag of the American Colonies and it was the first American flag to fly over foreign soil.

Drawn by A. T. Manookian

THE MARINE CORPS GAZETTE

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First American Flag to Fly Over Foreign Soil

BY MAJOR EDWIN NORTH MCCLELLAN, U.S.M.C.

■ The first American Flag to fly over foreign soil was that carried by the Marines and Sailors, of Commodore Esek Hopkins' Fleet, at New Providence, Bahama Islands on March 3, 1776. The evidence points to it being either the Grand Union (Great Union, Striped Union, or Cambridge) Flag, or the Rattlesnake Flag, despite the opinion that the latter was merely the Standard or Flag of the Commander-in-Chief of the Fleet.

Continental Congress, sitting at Philadelphia, had authorized the acquisition of several merchantships to be converted into warships. They were to form what is known as the Squadron or Fleet of Commodore Esek Hopkins. The date of Hopkins' arrival at Philadelphia and the date of his going on board the *Alfred* to assume command, are intimately associated with the subject of this "First Flag." The Naval Committee offered Esek Hopkins the office of Commander-in-Chief of the Fleet on November 5, 1775. He did not accept until a later date and was not commissioned until December 22, 1775.

"They have pitched upon you to take the command of a Small fleet, which they and I hope will be but the beginning of one much larger," wrote his brother from Philadelphia to Esek Hopkins who was then in Rhode Island, on November 6, 1775.

Esek Hopkins arrived in Philadelphia on or before November 29, 1775, as shown by the following letter from Philadelphia dated December 2 from The Rhode Island Treasury Committee (Nathaniel Mumford, Thomas Greene, and Gideon Mumford) to Governor Nicholas Cooke.

"General [Esek] Hopkins, this morning, desired us to acquaint you that 'tis yet a matter of doubt whether he engages in the service here or not. If he does not engage in this service, he will set out for home as soon as his son and young Mr. Jenskes are well of the small-pox. They were inoculated," November 29, 1775.

On the same date Samuel Ward and Stephen Hopkins, at Philadelphia, wrote Governor Cooke that "General Hopkins has arrived very well" and "his accepting the command of the Fleet gives Universal Satisfaction."

December 3, 1775, is the first date on which we see an American flag on any vessel that later formed one of Hopkins' Fleet. It appeared on the *Black Prince*, known by that name on the date and not yet as the *Alfred*.

"An Admiral is appointed, a Court established, and on the 3d Instant [December 3, 1775], the Continental Flag

on board the *Black Prince*, opposite Philadelphia, was hoisted," wrote a Maryland loyalist to the Earl of Dartmouth.

What the flag was that was hoisted, who raised it and whether Esek Hopkins or John Paul Jones was on the *Black Prince* when it was hoisted, is not known.

On December 6, 1775, a gentleman in Philadelphia wrote to a friend in England that "the *Black Prince*, a fine vessel, carries a flag," and that "the Admiral and Commanders are determined on, but not publicly known." The name *Alfred*, apparently, had yet not been given the new vessel.

"My commission under the United Colonies is dated the 7th of December, 1775, as First Lieutenant of the *Alfred*," wrote John Paul Jones. "On board of that ship, before Philadelphia, I hoisted the Flag of America with my own hands, the first time it was ever displayed, as the Commander-in-Chief embarked on board the *Alfred*."

British intelligence dated December 12, 1775, in Philadelphia was that the "Commodore who commands this Fleet is from Rhode Island, his name is Hopkins." So Commodore Esek Hopkins was in Philadelphia, and publicly known to have been designated as Commander-in-Chief of the Fleet, at least by December 12, 1775.

December 22, 1775, was the date on which Congress resolved that certain naval officers (including Esek Hopkins and John Paul Jones) be appointed. They had already been "selected" or nominated by the Marine Committee and several possibly had joined their ships prior to this date.

The Pennsylvania Committee of Safety, on December 23, 1775, "cheerfully granted" permission to the "Committee of Naval Affairs" for "General Hopkins of the *Alfred* or any other Commander of the Continental Ships of War," to search outward bound vessels for "Seamen or others" belonging to their vessels.

Bradford's *Pennsylvania Journal* and *The Weekly Advertiser* of December 27, 1775, reported that at Philadelphia "on one of the drums belonging to the Marines, now raising, there was painted a Rattlesnake, with this modest motto under it, 'Don't Tread on Me!'" and that as "it is the custom to have some device on the arms of every Country," it was supposed that "this may be intended for the Arms of America." This same information appeared in the *Boston Gazette and Country Gentleman*, of a later date.

De Benvouloir, the discreet emissary of Vergennes, who arrived in Philadelphia the latter part of 1775, just after Congress had ordered the ships of war, reported to

the French Minister: "They have given up the English flag and have taken for their device a Rattlesnake with thirteen rattles, and a mailed arm holding thirteen arrows."

The first reference, in American History known of today, to the thirteen striped flag called Grand Union or Cambridge, is when George Washington wrote on January 1, 1776: "We hoisted the Union Flag in compliment to the United Colonies" on the day "which gave being to the New Army." Sixteen days later the Captain of an English transport at Boston wrote that he could "see the Rebels' Camp very plain, whose colours a little while ago were entirely red" but "they have hoisted the Union Flag."

British intelligence at Philadelphia on January 4, 1776, was that "about one o'clock sailed the ship *Alfred* and the ship *Columbus* with two Brigs," and that "Hopkins commands the *Alfred*" which carried "English colours, but more Striped." This was corrected by stating that these "privateers" only "fell down the River and did not sail."

Describing this same movement of Hopkins' Fleet, a gentleman in Philadelphia wrote "of the sailing from that place of the first American Fleet that ever swelled their sails on the Western Ocean;" that "this fleet consists of five sail, fitted out from Philadelphia, which are to be joined at the Capes of Virginia by two ships more from Maryland, and is commanded by Admiral Hopkins;" and that "they sailed from Philadelphia amidst the acclamations of many thousands assembled on the joyful occasion, under the display of the Union Flag, with thirteen stripes, in the field, emblematical of the Thirteen United Colonies; but, unhappily for us, the ice in the Delaware, as yet, obstructs their passage down."

The above is the first information, known today, that the Grand Union Flag was flown by the Navy. Hopkins' Fleet was now at Reedy's Island below Philadelphia.

On January 5, 1776, the Naval Committee directed Commodore Hopkins "to proceed with the said Fleet to Sea" "for Chesapeak Bay in Virginia" to strike Dunmore's fleet; master the British forces off the Carolinas and from thence to Rhode Island, etc. About the same time the Committee wrote a letter, possibly to the Virginia authorities, that "the largest ship will carry at her Misen Peak a Jack with the Union Flag and striped red and white in the field." The date of this last letter is not known. Its date may be January 5, 1776.

While in Philadelphia, Christopher Gadsden, a member of the Naval or Marine Committee, and representing South Carolina in Continental Congress, wrote Commodore Hopkins, on January 15, 1776, that he had received "orders to go to Carolina" and expected to "set out on Thursday morning." He requested Hopkins to let him know "what signal you will show when off our Bar." In compliance with this request Hopkins replied that "some one of the Fleet if together or the small sloop if alone will hight a Striped flag half up the flying stay."

When Christopher Gadsden left Philadelphia, about this time, for South Carolina he carried with him a Rattlesnake Flag which he presented to the Provincial Congress of South Carolina on arriving in that state. The Journal of that Congress, for February 9, 1776, described this flag as follows:

"An elegant Standard, such as is to be used by the Commander-in-Chief of the American Navy; being a yellow field, with a lively representation of a rattlesnake

in the middle, in the attitude of going to strike, and these words underneath, 'Don't Tread on Me!'"

The "Signals for the American Fleet by day," prescribed on February 17, 1776, referred to an "ensign," a "pendant," a "broad pendant," a "white pendant," a "red pendant," "The Standard," and a "striped jack and ensign." A "St. George's ensign with stripes," as a signal "for the *Providence* to chase," was also included.

Concerning the period under discussion the *London Chronicle*, July 27, 1776, reported, as quoted by Preble, that "the Colours of the American Fleet have a snake with thirteen rattles, the fourteenth budding, described in the attitude of going to strike, with this motto, 'Don't Tread on Me!'" A letter dating from Williamsburg, Va., about May 11, 1776, and the *Boston Gazette and Country Gentleman*, April 14, 1777, both gave similar information. An English writer of the period wrote: "A strange flag has lately appeared in our seas, bearing a pine tree with the portraiture of a rattlesnake coiled up at its roots with these daring words: 'Don't tread on me.' We learn that the vessels bearing this flag have a sort of commission from a society of people at Philadelphia, calling themselves the continental congress."

With the information set forth above from original sources is there anyone who can yet state with authority what flag flew over the *Alfred* on December 3, 1775? On what date and what flag John Paul Jones raised over the *Alfred*? On what date Esek Hopkins boarded the *Alfred*? And on what date the Grand Union or Cambridge Flag first was raised over an American naval vessel?

The Fleet of Hopkins finally sailed out of Delaware Bay on February 17, 1776. Whatever the cause of Hopkins' disregarding his orders, he sailed for the Bahamas, arriving at Abaco Island on March 1, 1776. Here "two small sloops" were "detained as transports to carry the Marines over to Providence" Island, wrote Hopkins. A plan was prepared to take Nassau and secure the munitions of war there.

Nassau was situated on the northern coast of the Island of New Providence protected by two forts, Fort Nassau at the west, and Fort Montague at the east.

John Paul Jones wrote that "the Marines and Landsmen, to the number of three hundred and upwards, under the command of Captain Samuel Nicholas, were embarked in the two sloops." They "were to remain below decks until the two sloops had anchored in the harbor close to the forts, and they were then to land and take possession." The "plan would have succeeded," had not "the whole squadron appeared off the harbor in the morning, instead of remaining out of sight till after the sloops had entered and the Marines secured the forts. On the appearance of the squadron, the signal of alarm was fired, so that it was impossible to think of crossing the bar." This Expeditionary Force of Marines under Captain Samuel Nicholas, "with two vessels to cover their landing, were immediately sent in by the east passage," on March 3, 1776. Carrying an American Flag, these Americans landed on the east end of the Island at a place called New Guinea.

An observing resident of New Providence wrote that "the Colors of the American Fleet were striped under the Union, with Thirteen Strokes called the Thirteen United Colonies; and their Standard a Rattlesnake, motto—'Don't Tread upon Me!'"

As Captain Nicholas led his column toward the town he received a message from the Governor. Captain

Nicholas replied that the landing was for the purpose of taking "possession of all the warlike stores on the Island belonging to the Crown but had no design of touching the property or hurting the persons of any of the inhabitants," except in self defense. The American armed force then advanced toward Fort Montague, a stone fort situated half way between the landing-place and the town. As they were marching around a deep cove with "a prodigious thicket on one side and water on the other," the fort fired three 12-pounder shots at them. "A flag" was sent to the British with the result that they abandoned the fort after spiking the guns.

The next morning, March 4th, at daylight, the Americans pushed on and took possession of the Government House and Fort Nassau.

"After hoisting the striped flag and holding possession of the place for a few days, Commodore Hopkins" re-embarked his Marines and Bluejackets on March 16th and sailed homeward-bound from New Providence on March 17, 1776, St. Patrick's Day—the day that the British evacuated Boston. The entire fleet did not, however, get underway until the 18th. He carried with him a large quantity of cannon, powder, stores, the Governor of New Providence, and other officials, as hostages.

On the return cruise the American fleet captured the *Hawke* and *Bolton*. On April 6, 1776, the American Fleet fell in with the *Glasgow* and forced her to retire. Captain Howe of the *Glasgow* reported that:

The American "Admiral hoisted Dutch Colours" on the *Alfred*, and "the others Strip'd."

Six days after the Fleet of Hopkins had sailed homeward bound from the Bahamas, John Jay, on March 23, 1776, at Philadelphia, wrote Alexander McDougal that, "as to Continental colours, the Congress have made no order as yet concerning them, and I believe the captains of their armed vessels have in that particular been directed by their own fancies and inclinations. I remember to have seen a flag designed for one of them, on which was extremely well painted a large rattlesnake, rearing his crest and shaking his rattles, with this motto, 'Don't Tread on Me,' but whether this device was generally adopted by the fleet, I am not able to say. I rather think it was not."

Despite the lack of decisive information, it is believed, however, that the first American Flag to float over foreign soil was the Grand Union Flag.

The George Barnett Memorial

■ On the heights of Mount Saint Alban overlooking the capital city of Washington the new Washington Cathedral of the Episcopal Church of America is rising in stately and imposing architectural beauty, destined to be one of the truly great cathedrals of America and the world. Within its hallowed space lie the remains of the late President Woodrow Wilson and of the late Admiral of the Navy George Dewey and as time passes more distinguished citizens of our country who have lived to add to its name and fame will find their last resting place within its walls.

The Bishop of Washington, the Rt. Reverend James E. Freeman, is the guiding spirit in the construction of this great edifice, and it is with a thought of great satisfaction that we announce that he has seen fit to designate appropriate space in the Cathedral for the erection of a bronze tablet to the memory of Major General George Barnett, United States Marine Corps, Commandant of the Corps during the stirring days of the World War.

The long and distinguished service of General Barnett from his graduation at the Naval Academy in the Class of 1881, through every commissioned grade in the Marine Corps from second lieutenant to Major General Commandant, brought him a veritable host of friends and admirers during his life time and gave him a place in the history of the Marine Corps which is well worthy of perpetuation.

Following the offer of the Bishop of Washington of a suitable space for the erection of the bronze tablet to

the memory of General Barnett a committee consisting of Major General Logan Feland, Brigadier General George Richards, and Lieutenant Colonel Charles R. Sanderson, took up the work of carrying out the necessary details of the project.

The Committee in its letter notifying the personnel of the Marine Corps of the plans of the committee and the scope of the project makes the following statement.

"A suitable memorial can be purchased and installed for the sum of \$1,200. It is considered appropriate to solicit contributions from our personnel, active, reserve, regular, temporary, or otherwise, past and present. We feel that those who share with us an appreciation of the services rendered by the late Major General George Barnett, United States Marine Corps, should have the opportunity to contribute to the extent that they are willing to defray this expense. At the present time no sum greater than \$2.00 is expected from any individual.

"Individual remittances should be made to Lt. Col. Chas. R. Sanderson, A.Q.M., U.S.M.C., Headquarters, U. S. Marine Corps, Navy Building, Washington, D. C., and Commanding Officers of posts and stations will be asked to designate an officer of their command to solicit subscriptions, receive collections, and otherwise to assist the forwarding of this purpose.

"To all who were friends and associates of the late Major General Barnett this opportunity to do something constructive and permanent in honor of his memory will undoubtedly be appealing."

The New Administration

■ CLAUDE AGUSTUS SWANSON was born at Swansonville, Pittsylvania County, Virginia, March 31, 1862. He attended the public schools until he reached the age of sixteen years when he attended the Virginia Polytechnic Institute for one year and then held a position as a clerk at Danville, Va., for two years, after which he entered Randolph-Macon College at Ashland, Va., graduating therefrom with the degree of A. B. in 1885. He studied law at the University of Virginia, graduating with the degree of LL.B., and then entered upon the practice of law at Chatham, Va., from where he was elected to the Fifty-third Congress and reelected to the Fifty-fourth, Fifty-fifth, Fifty-sixth, Fifty-seventh, Fifty-eighth and Fifty-ninth Congresses, serving from 1893 to 1905.

He was elected Governor of Virginia in 1905 and was inaugurated as Governor on February 1, 1906, serving until February 1, 1910, after which he was appointed to fill the vacancy in the United States Senate caused by the death of Senator John W. Daniel. He was elected United States Senator from Virginia for the term from 1911 to 1917, and reelected for the succeeding terms 1917-1923, 1923-1929, and 1929-1935.

In March, 1933, he resigned as United States Senator from Virginia to accept the appointment as Secretary of the Navy in the cabinet of President Franklin D. Roosevelt.

The new Secretary of the Navy comes into office as the head of the Navy Department with a wide experience in naval affairs and a thorough knowledge of the history of the Navy, the present needs of the naval service and its future requirements if it is to be made ready to meet in adequate strength the exigencies of the future as the First Line of the National Defense. For years

he served on the Naval Affairs Committee both as a member and as Chairman of the committee, as Governor of Virginia he took a keen interest in developing and enlarging the great Hampton Roads Naval Base, and as Senator from Virginia this interest continued and was extended to include the new Marine Corps Base at Quantico for the organization and training of the East Coast Expeditionary Force of the Marine Corps.

President Hoover selected Senator Swanson as a member of the United States delegation to the London Naval Conference of 1930 on account of his thorough knowledge of naval affairs and

his well established opinions as to the requirements of the U. S. Navy in comparison with naval forces of other first class foreign powers.

The Navy and the Marine Corps are fortunate in having at this critical period a Secretary of the Navy so well equipped by training and experience to champion the cause of the naval service and to render prompt decision in the many important questions now arising from day to day.



Honorable Claude Augustus Swanson
The Secretary of the Navy

Underwood & Underwood

of The Navy Department

■ COLONEL HENRY LATROBE ROOSEVELT was born at Morristown, N. J., October 5, 1879, the son of Lieutenant Nicholas L. Roosevelt, U. S. Navy. In 1896 he was appointed to the Naval Academy from New York and saw service as a Naval Cadet in the Spanish-American War. He resigned from the navy in 1899 and in December of that year was commissioned a Second Lieutenant in the U. S. Marine Corps. His further promotions in the Marine Corps were First Lieutenant, July 23, 1900; Assistant Quartermaster with the rank of Captain, in 1903; Major, in 1908; Lieutenant Colonel, July 1, 1918. He resigned from the Marine Corps July 3, 1920, to engage in business.

Colonel Roosevelt, after being commissioned in the Marine Corps, served with the First Brigade Marines, Cavite, P. I., from 1902 to 1904, when he was ordered to duty at Marine Headquarters, Washington, D. C. In 1906, he was with the Marine Battalion of the U.S.S. *Columbia* on expeditionary duty in the Isthmus of Panama, and he was on temporary expeditionary duty in Cuba in 1907. In 1908, he assumed charge of the Depot of Supplies, San Francisco, California, and in 1911 returned to the Philippines as Brigade Quartermaster. In August, 1914, he was assigned to special duty at the American Embassy, Paris, in connection with the relief of Americans in Europe. During 1915, and the

early part of the year 1916, he was attached to Marine Headquarters, Washington, D. C. He was ordered to duty in Haiti and served as a Director of the Haitien Constabulary from April 1, 1916, to May 12, 1917. In June, 1917, Colonel Roosevelt was appointed Quartermaster of the Marine Barracks, Quantico, Virginia, and served in that capacity until the time of his resignation

from the service on July 3, 1920. On February 15, 1933, he was commissioned a Colonel in the Marine Corps Reserve.

From 1923 to 1932 Colonel Roosevelt was European Manager of the Radio Corporation of America with headquarters at Paris, France, resigning from that position to return to the United States and look out for his large private interests. His home is the ancestral country seat of the family, Roosevelt Hall, at Skaneateles, N. Y.

Colonel Roosevelt is the fifth member of his family to occupy the position of Assistant Secretary of the Navy; the others were Theodore Roosevelt, 1897-1898; Franklin D. Roosevelt,

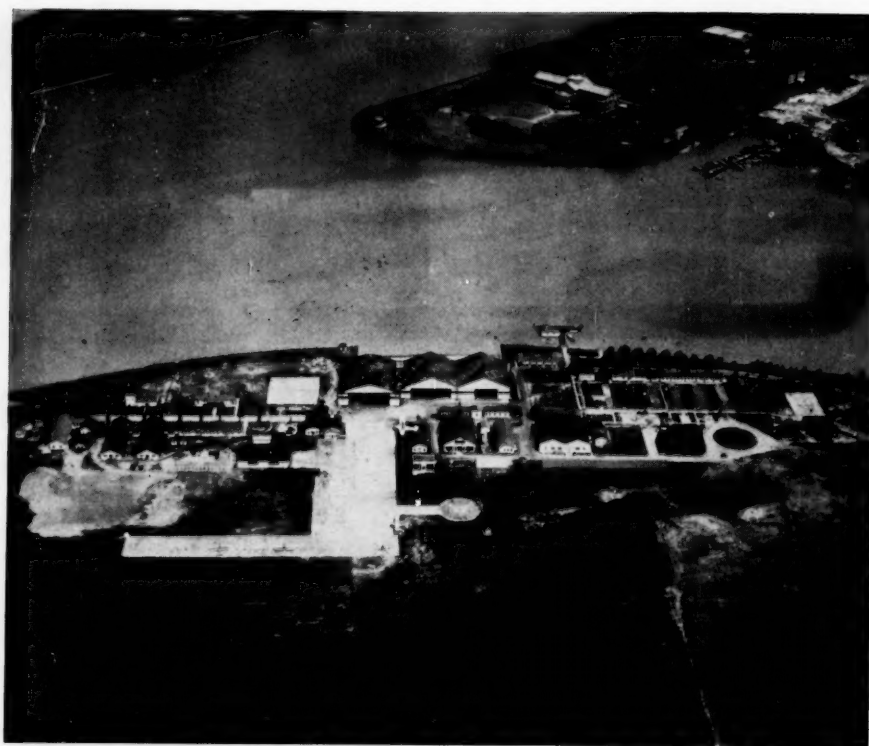
1913-1920; Theodore Roosevelt, Jr., 1921-1924; Theodore Douglas Robinson, 1924-1929.

With his long experience in the service and business training in a high executive position the new Assistant Secretary of the Navy is especially well fitted to administer the duties of his office in a manner to increase the efficiency and prestige of the Navy and the Marine Corps.



Honorable Henry Latrobe Roosevelt
The Assistant Secretary of the Navy

Harris & Ewing



Naval Air Station, Anacostia, D. C., with U. S. Army War College in the background

Across the Continent in an Open Plane

BY COLONEL HAROLD C. REISINGER, U.S.M.C.

■ "See America First" has ever been a pet slogan of mine. Like most officers, it has been my fortune to see quite a bit of foreign lands and not nearly enough of my own country. When the opportunity offered for a flight across the continent and return in an open plane, thus obtaining a bird's-eye view of a hundred mile strip of North America, it seemed too good to be true. The fortuitous combination of inspections to be made on the West Coast, coupled with a movement of new Navy planes to San Diego, California, presented this welcome opportunity. To put it mildly, I jumped at the chance.

My preparations were simple. One suitcase held all needful clothing; a notebook with pencil attached by twine, and a flock of charts properly folded, and I was all set, impatiently waiting for the great day. The day set for the start rolled around and, after a six o'clock breakfast at an all-night restaurant, we arrived at the Naval Air Station, Anacostia, D. C., at seven o'clock. At eight o'clock we took off. Our plane was a new SU-3, a scouting Vought, powered by a 600-horsepower Hornet motor. Lieutenant Clyde W. Smith of the Navy was the pilot. In an accompanying plane of the same type, piloted by Chief Aviation Pilot E. H. Standfield, rode Mr. Edward C. Wynn of the State Department. The morning was misty; a low ground fog obscured all objects at a thousand yards, but as the sun got on the job, considerable of this mist burned off.

The visibility was not good as we circled the field, gaining altitude. The city of Washington spread mistily northward between the Potomac and the Eastern Branch, Alexandria, the George Washington Ma-

sonic Memorial, Mt. Vernon and the Memorial Boulevard rushed past us as a colorful panorama, as we sped south on our course at one hundred and thirty miles per hour. Jack Frost had been busy and as far as the eye could reach had spread a carpet of many colors. We set a compass course to follow the Atlanta Airway down to Greensboro, North Carolina, but the forward compass proved not worthy of our trust. Smith's note read, "My compass gone haywire—what does yours read?" We exchanged notes, stating compass readings, and it was quickly evident there was something wrong. Map checks showed that the erratic compass was leading us too far west. So we veered eastward and picked up the Chesapeake and Ohio Railroad, which we followed to its junction with the Richmond, Fredericksburg and Potomac Railroad, thence on to Richmond.

We were flying through country memorable in American history. To the east of us lay Chancellorsville and the Wilderness. There, great armies in Gray and Blue had marched, fought and died for a principle, the right of a state to control its internal affairs or be subject to control by a central government. The Blue won! The central government controls now—Federal aid has largely replaced state initiative. The lands beneath us which had been the heart and inspiration of the struggling colonies of Revolutionary days, as well as the scene of marching armies of the Civil War, now drowsed peacefully, hazy in this October morning, autos speeding along fine highways, the only movement visible. In rapid succession we passed Occoquan, Quantico, and Acquia Creeks, thin silver threads, which in their pre-Revolutionary days had played a promi-

ment role in the shipping of the young continent. Time changes. The little streams meander through quiet valleys, passing sleepy villages, hiding their loss of importance beneath the trees upon their banks, their channels filled by silt and rocks.

As we approached the James River, the air was getting "soupy," and we came down below two thousand feet. However, we managed to make Greensboro, N. C., without difficulty and landed at Lindley Field to refuel and to pick up weather reports. Here we were confronted with such discouraging information from the south that it became evident that some major atmospheric disturbance was rapidly making in from the Gulf. We waited for the stated 12:30 weather report. About the time it was received a large Condor of the American Airways Company came in from Atlanta. Although that 12:30 report was not good, the Condor having made the trip, we took off optimistically at 1:00 o'clock in an effort to reach Atlanta. Because of lowering ceiling and limited visibility we followed the Bankhead Highway and the Southern Railroad. A plane traveling between one hundred thirty and one hundred fifty miles an hour needs visibility and, in its absence, some definite guide to tie to. Flying fairly low at that speed, the rapidity with which towns and landmarks flashed by was astonishing to the rear seat navigator, this writer. We checked on Salisbury and Charlotte in record time and tore down upon Kings Mountain, vaguely outlined against a gray skyline. Kings Mountain! Back to Revolutionary days. General Cornwallis sent his raiding Major, Ferguson, into this country to ravish and destroy. The Continental Irregulars under Williams, Campbell, Isaac Shelby, and John Sevier, closed in behind him and brought him to battle at Kings Mountain, where they destroyed his raiding column.

Spartanburg ahead, and passed; and just beyond Cowpens, again the scene of a sanguinary fight. Here Morgan commanded, with his cavalry under Colonel Washington, and gave Cornwallis and his "best partisan officer," Tarleton, a sound licking. The country below that, seen as through a glass dimly, so peaceful and quiet, had been the scene of many bloody encounters.



Municipal Airport, Shreveport, Louisiana, on the Red River



Vought Su-2 Bomber in Which the Flight Was Made

The weather continued to thicken, forcing us down to one thousand feet as we checked on Anderson, South Carolina. Ahead seemed an ever-thickening gray wall. "Soupy," the adjective of the aviator, best fits it; the discouraging gray of cold mutton broth. The wind increased and with it came flurries of rain. We pushed on to the Seneca River, then we turned back to Anderson, seeking definite information of the weather to the south, and landed at the emergency field of the Department of Commerce beacon station on the Atlanta Airway at three o'clock. The reports we now received settled the question of flying farther south that day. The gulf storm had reached Atlanta, bringing bad flying weather, visibility of a mile and a 400-foot ceiling. There was nothing left to do but secure the planes.

We received every courtesy from the keeper of the Beacon Station and his family. After hot coffee, being thoroughly chilled, Mr. Wynn and I drove into town. The two aviators, because of the constantly increasing force of the wind, electing to remain at the station.

By 4 o'clock Saturday afternoon we were very comfortably located in the John C. Calhoun Hotel, named in honor of South Carolina's distinguished native son, the great nullifier. John Caldwell Calhoun was born

but a short distance below Anderson and rendered distinguished service to his country in both houses of Congress, as Secretary of War, and as Vice President. When we settled down to sit out the storm, it seemed at the time that the glorious adventure had fizzled like a wet firecracker. The hours dragged as we watched the sky for encouragement and conned the weather reports. During our stop we met a real pioneer in the flying game. He had served in the 96th Combat Squadron in France, and he and his side-kick, after the War, had taken up barnstorming aviation. They had made their headquarters at Americus, Ga., using one of the old "Jennies," possessed of a ninety horsepower motor and an air speed of about sixty miles, perhaps. This gentleman had some very vivid and amusing recollections of those early days of commercial aviation, and to him the present splendid Candler Field at Atlanta was a "bullring, two-way, only." He



Delaware Mountains, Western Texas, Elevation 7,000 Feet

claimed that he was present when Colonel Lindbergh bought his first plane from a Mr. Wych. Mr. Wych was not in the airplane business except incidentally and as a sideline of an automobile company which had bought a large number of discarded government planes. Colonel Lindbergh's first plane, according to our aviator, was one of this character, and it was due to the Colonel's mechanical ability and his rare air sense that he survived his early experiences in this particular "crate."

On the morning of October 18th the leaden skies showed signs of breaking and letting in some sunlight on the damp and discouraging scene. While we were marooned in Anderson, the official rainfall was four inches, and until Monday night the rain was accompanied by a near gale. Much heartened by the sign of clear weather, we went early Tuesday to the flying field and at 10:45 we took off for Atlanta, with a ceiling of about 5,000 feet and fair visibility. We swung west towards Toccoa, picked up the Southern Railroad, and followed it on into Atlanta. All rivers were over their banks, particularly the Chattahoochee. Though our visibility was somewhat limited by light clouds, the country spread before us marked by fine roads. One wondered what Sherman and Joseph E. Johnson would think of this country now, over which they struggled for many a weary month, with crippled transport through almost impassable roads, for the possession of Atlanta, the Gate City of the South. Roads played an important part in the strategy of the Civil War—making and breaking generals, frustrating the best-laid plans of campaigns, almost whimsically.

Approaching Atlanta we were forced down by low-lying clouds to about 2,400 feet; still, under this stratum, there was a fine view of the surrounding country. To the eastward appeared Stone Mountain, where recently, on two occasions, the pilot of the night air mail has come to grief. The mountain rises about 1,700 feet in an almost level plain and forms a constant hazard to night flying. We skirted the west of Atlanta, its skyscrapers forming a central, massive monument to its ever-growing industry, and landed at the Municipal Air Port near East Point at 12:30. As we changed time, one hour, we taxied up to the Army hangar at 11:30. After lunch, and favorable weather reports from Birmingham and the West, we took off, for Meridian, Miss.

I began to realize on this flight that there are two

sides to such an air journey, and personally I select the job of passenger. The pilot is generally concerned with the navigation of the ship and the performance and supply of its motor. Temptation is strong, I'll admit, to assist in navigation, but I soon learned that the pilot was always right; when I thought he was lost, as a matter of fact I was all wet! Fortunately I did not display my ignorance. While the pilot is concentrating upon his important duties, the passenger, relying upon the reassuring hum of the engine, can enjoy the airman's view of the country beneath and give free rein to his memory and imagination.

Driving west for Birmingham, we were soon flying through the mountains—the lower ranges of the Great Smoky, certainly most appropriately named.

Beneath us now swirled flooded rivers, over their banks to submerge orchard and pasture; many farms seemed to have their hillside fields terraced to prevent excessive erosion. A sound precaution, considering the chocolate flood rushing through the valleys! At 1:15 p.m. we bore down on Birmingham, visible in the distance through a heavy haze and beautifully cupped in its surrounding hills. To the southwest the Black Warrior River twisted and turned through forest and bottom land, like some great yellow snake. The Birmingham Air Port showed up splendidly from the sky, its runways plainly marked and its huge expanse presenting a safe haven to those who take to the air. We sped above a beautiful, rolling land of fine forests and fair fields; Alabama, refreshed by the rain, presented an attractive picture.

At 2:45 p.m. we landed at Meridian, Mississippi, to refuel, and took off in about thirty minutes. At 4,000 feet we flew for Jackson, Mississippi, following the tracks of the Yazoo and Mississippi Valley Railroad. The pilot's compass was still haywire, but the straight line of railroad beneath furnished an ample and convenient guide, as we raced west at a speed varying from 140 to 160 miles an hour. In a short while, Jackson, Miss., loomed ahead across the Pearl River. In this neighborhood Sherman first matched wits and tactics against Joseph E. Johnson, while westward lay Vicksburg, where General Grant so convincingly added confirmation to his growing reputation as a general who could bring victories to the Union. The brand that Lincoln sought and prayed for.

Soon the whole delta of the Big Black River and the Mississippi came into view, then Vicksburg, nestling in the hills on the east bank of the Mississippi, presenting a lively appearance. We crossed the Mississippi. There had been no heavy rains in this neighborhood and the Father of Waters was a well-mannered, stately gentleman compared to those to the east. But its double line of levees, endless breastworks marked the defenses against the times when "Old Man River" went on a rampage. Tallulah, La., and its large airport to the east of the town slipped beneath us.

The afternoon was growing apace and the sun's slanting rays illuminating the ground mist, augmented by smoke from hundreds of brush fires, made it difficult to see the railroad. Mist and fog are natural enemies of the pilot; the scene below us presented flying difficulties, but the beauty of the sun tinting the mist to rose and lavender presented a picture pleasing to the passenger. The front and back seats of an airplane can have as much difference in viewpoint as those of an automobile.

Later that afternoon found us over the new Army air field at Shreveport, Louisiana. As it was not open for service, we continued across the Red River to make our landing at the Municipal Field. The Army field quite fooled the amateur navigator; he mistook it for a subdivision of the city. The field is commodious; the hangars, officers' quarters, recreation halls—every detail seemed complete and elaborate, the last word in airports. To the south of Shreveport the Red River indulges in the most elaborate and intricate convolutions, turning and twisting as if undecided where to deposit its burden of silt. Rich the land of these river bottoms! Again in historic territory. This neighborhood saw General Banks ingloriously conduct his futile, aimless campaign to meet with defeat at the Sabine Cross Roads. Along this route passed thousands of southerners pouring into northern Mexico; a new civilization imposed upon an old; youth destined to be served and the new state, Texas, to be born.

Soon after we landed at Shreveport the plane was refueled and secured and we left by taxi for the Washington-Youree Hotel. Here we found excellent accommodations and a service that left nothing to be desired. A bath and dinner, and we were ready for bed, and by nine o'clock we were all asleep. At 5:00 a.m. the telephone rang and we started a rather memorable day.

After a hasty breakfast we went to the field and by 7:15 the planes were warmed up, and the early mist in the river bottoms burned off sufficiently for us to take off. We were up and away for Dallas, following the Texas and Pacific Railroad, with a tail breeze to speed us westward.

Soon we were above the eastern wooded section of Texas where innumerable brush fires sent their white clouds into the early morning breeze to be dragged along the tops of the trees. In the clearings were many oil derricks, dotting the country like innumerable monuments—monuments, I fear, in many cases, to futile hopes and vanished capital. Still, drilling was going on. So, either hope was strong, capital available or results had justified the activities.

Westward to meet the limitless plains where the horizon on all sides seemed to rise, leaving a great, hollow bowl. The early adventurer must have felt as insignificant on the plains as a lady bug in the middle of Pennsylvania Avenue, and twice as lonesome. We were rushing over country that had known the buffalo—the great herds of cattle—and now looks to oil and cotton for its major items of wealth. Oil derricks and storage tanks seem ever present in the picture, and in every railroad station cotton was piled high awaiting a demand for shipment; all baled up and no place to go. The frozen wealth represented by this store of cotton presented a concrete bird's-eye view of one side of the depression.

When thirty-five minutes on our way, a fog bank rolled upon us, forcing us slowly downward until we were cruising along the tops of the trees, so close that we could see the startled scramble of hens frightened by the great bird above them. Although the visibility was almost zero, the flat country beneath us afforded innumerable landing places. For quite a while we flew at this very low altitude,

speed reduced, and the knowledge that we were constantly approaching Dallas was no comfort in the circumstances. However, luck was with us and about twenty miles east of Dallas we were able to work up to a thousand feet as the fog reluctantly dissolved. Suddenly the city lay before us dazzling in the morning sun. Dallas, in the middle of the great plain, is a beautiful and inspiring sight from the air. Coming upon it as we did, its business section reaching skyward, gave the impressive dignity and strength of a battleship at sea to this city of the plains. The Trinity River was quite low. Three great causeways span the river bottom. The spaciousness of these western cities! Their founders were not restricted, and with a view to the future, as well as the present comfort of the inhabitants, helped themselves amply to territory. The result today is a striking, pleasing contrast to the congestion of our eastern cities and a monument to the vision of their founders.

An hour and thirty minutes after leaving Shreveport we were over Hensley Field, twelve miles to the west of Dallas, and landed there and refueled. We took off at 9:15, heading westward for Midland, Texas, and soon were flying over Grand Prairie. The Southern Pacific joins, in a short distance, Dallas with Fort Worth, another fine city, to the north of which Lake Worth stretched beneath us in the morning light. The Brazos River next cut our line of flight, wandering erratically southward, to cross the state and find its outlet in the Gulf at Freeport, almost a thousand miles south. We flew above a country of huge farms and small towns, each with its hundreds of oil tanks, resembling, from our height, iced cup cakes—as apt a simile as any that fit the picture. Roads ran to the north, south, east and west without a kink, to disappear on the horizon. Ranger and Abilene, small cities, with excellent airports, flashed by, and Cisco, with a dam and hydraulic electric power plant to the north. At six thousand feet, miles of the great State of Texas spread upon either hand for our edification.

All day we raced our shadow as we flew with the sun. Gaining an hour at Midland, we actually did not catch up with our image below in the first six hours



The Mission of San Xavier Near Tucson, Arizona



Naval Air Station, North Island, San Diego, California

of flying. The West has the reputation of doing things in a big way; certainly we were treated to marvelous flying conditions and visibility limited only by eyesight. Near the Colorado River, far to the west, we saw a huge oil fire. It closely resembled a cyclonic cloud. A great mushroom darkened the sky, and a long, diminishing funnel touched the source upon the ground. At Midland we passed hundreds of storage tanks to the east, landing at the airport west of the city at 12:30 p.m. Here we found seven Navy planes under command of Lieutenant Commander Maile en route to San Diego. These planes had left Washington the day before our departure. They had encountered the storm that held us up, but had the good fortune to take refuge in Montgomery, Alabama. Time changes again, so at 11:25 mountain time, having witnessed the departure of Commander Maile's flight, we left Midland, Texas. We worked up immediately to an altitude of 5,000 feet and headed due west across the prairies, with limitless view to compensate for the bumpy air we experienced. After a short flight above a barren uncultivated section, we reached the quaintly-named town of Wink, Winkler County, Texas. Here is an extensive "tank farm." The atmosphere was so saturated with petroleum that the odor was noticeable at five thousand feet. From the "tank farm" the Pasotex Pipe Line extends across country with hardly a deviation from the straight until it climbs the Delaware Mountains, a clear line some seventy miles long, drawn upon the yellow desert as true as upon the surveyor's blue print. Crossing the Delaware Range, the line climbs by zig-zags, but once over the crest it again follows the valley floor down into El Paso by straight tangents. To force the oil up and over the mountains, pumping stations are located at Ora and Guadalupe. Map names, not towns. A few buildings in a huddle, surrounded by desert.

The Delaware Mountain and Creek evidently were named by some homesick Easterner in this dry coun-

try who longed for the neat green fields and cool streams of his tidy little home state. The name could have been derived from the Delaware Indians, but I like the other version better.

We rushed towards the mountains, at an average speed of 160 miles an hour, and soon began to climb. We rose steadily to 11,000 feet and from this vantage the Salt Basin beyond was visible. To the south and west was the Sierra Diablo Range and due west, the Hueco Mountains, their rugged peaks softened by distance. We skirted the New Mexico boundary, to the north a country for years the haunt of the Apache; an arid waste, boldly stern, uncompromising, beautiful only in its grand challenge to puny humans to wrangle sustenance from its sand and boulders. A land where nature withheld its bounty, raw and bitter, well calculated to fully develop the irascibility and cruelty of its Indian inhabitants. From Wink to El Paso we saw no town—small groups of adobe buildings, widely separated by desert, were the only signs of human presence. A country of magnificent distances and desolation, of painted cliff and desert dotted with sage brush, scenically fascinating in color and grandeur. Flying over

it, in our speedy plane, was a tremendously interesting experience, but the zest of enjoyment could well have been lessened had this writer dwelt upon the thought that this would be an exceedingly unpleasant time for the engine to quit on the job. Fortunately, this was an afterthought.

West of the salt lakes, near Mace's Place, we saw the seven Navy planes below us going into an emergency landing field maintained in the Salt Basin to meet just such a contingency. Later, when these planes joined us at El Paso, we were told that one had had some minor trouble with its fuel lines. Once over the Delaware Mountain we dived to a somewhat reasonable altitude of 7,000 feet; a great relief, for we found it bitter cold in the high altitudes. About one o'clock the Franklin Mountain, in whose shadow nestles El Paso, was rushing at us across the miles of sage brush. Twenty minutes later we landed at Biggs Field, east of Fort Bliss. The Franklin Mountain breaks off rather sharply at the south to permit the passage of the Rio Grande. Directly to the west of Biggs Field is a large municipal airport, and the two fields in conjunction furnish a tremendous landing area. We spent but twenty-five minutes at Biggs Field, sufficient only to refuel, and we were off for Tucson, climbing at once to 7,000 feet, passing over the south end of Franklin Mountain. To the south of the river lay Juarez, the wicked, and I regretted the lack of time to investigate its reputed wickedness. The Franklin and Organ Mountains form a majestic barrier, confining the Rio Grande as it comes from the north to the Messila Valley, a fertile strip in this barren country.

We followed the Southern Pacific Railroad. The history of the building of this road constitutes one of the romantic chapters of American industry. An homeric struggle against nature and man, savage and civilized. The one fought openly for his free country; the other, actuated by greed, sought to destroy by cun-

ning to his own profit. Grimly the engineers fought to carry through the line and won against all odds. Black, rocky land lay south of our course, with much evidence of great lava flows during forgotten ages, and two plainly identified extinct volcanos. Along the route of the Southern Pacific and tying to it closely is that great automobile highway, "The Old Spanish Trail."

We passed Deming, a great shipping center for cattle in the old days. Beyond, and facing the railroad and highway, a lone mountain peak is decorated by letters one hundred feet high, inviting the world to purchase a certain type of automobile tire. Sacrilege or good advertising? A matter of taste.

The town of Lordsburg came into view as we crossed the Pyramid Mountain. Tucked away, deep in a nearby canyon, is Valedon, a mine in full operation, literally buried in a deep cleft in the range. To the south of us the Animas Mountains, its highest peak rising to 8,500 feet.

Looking over the map as we rushed westward between the great barriers of mountains to the north and south, names appearing there to disturb my memory—Gila, San Bernardino, Chiricahua, Cottonwood and Sulphur Springs, Dos Cabezas, Apache Hills, Animas. Back in a dark corner of my mind these names seemed familiar. For a while I was stumped, and then suddenly it came to me. A small farm in the hills of Virginia to the west of Fort Meyer. A quiet little gentleman with a white moustache and goatee, the picture of a retired Army officer of the old school. In the peace of the Virginia hills I spent many delightful hours listening to his account of the Geronimo campaign during which, due to over-exertion, he contracted the disease for which he was placed on the retired list. There at his home, shortly before the Spanish American War, I met one Sunday afternoon the future General Lawton. Through the thread of the reminiscences of this retired officer ran such names as Lawton, Jim Parker, Nelson A. Miles, Leonard Wood, and many others, who subsequently became distinguished during their Army careers, and have left their individual imprint upon Army tradition and American history in this barren and sterile country. To the north of our line of flight stood Fort Apache. Here in 1884 the wily Geronimo and his people resided under theegis of the kindly General Crook.

Because the General objected in the spring of 1885 to Geronimo throwing a "tiswin" party—a sort of a grand drunk that was liable to produce any form of Indian deviltry—Geronimo and a party of his braves went on the war path and took up the road to Old Mexico, leaving a wide swath of murder and pillage in his trail. Keeping one hop ahead of his pursuers, he charged down the Gila River Valley and finally escaped across the border. For eighteen months or thereabouts, he kept the Army busy until finally he was persuaded to surrender and did so to General Miles.

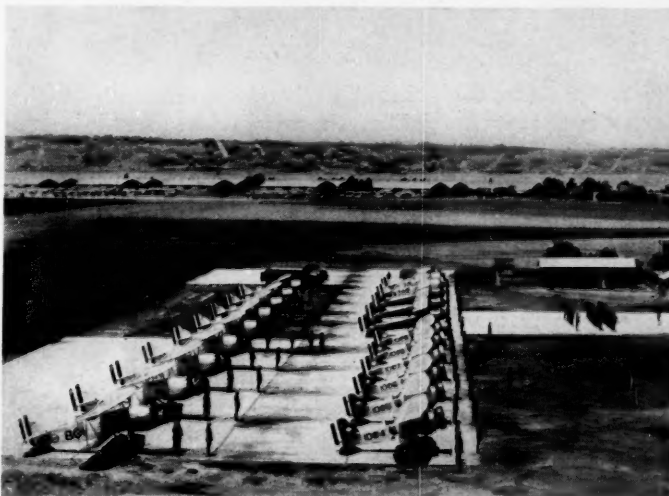
The devotion of the cavalryman and the doughboy has been recorded in story and song of the southwest, but one can hardly think of this period without dwelling for a moment on the heroism of the wives of the officers and men who accompanied them into this desolate country and served their men during the trying ordeal of this campaign.

Crossing the Dos Cabezas Mountains, we opened up ahead the Sulphur Spring Valley. Beneath us was the

Great Alkali Flat. As we passed a south wind was bearing a dust cloud at least 3,000 feet in height, which enveloped a small desert town named Willcox. That must have been a mighty uncomfortable afternoon for the people of that town, alkali dust being the last word as an irritant to the eyes, nose and throat. In this portion of the valley, we flew over the Dragoon Mountains at an altitude above ten thousand feet, below us the town of Benson on the Pedro River, a river in name only, there being no water in it when we passed. On every hand magnificent views, great peaks and mountain ranges and vistas up wide spreading valleys. Following down the valley between the Rincon and Santa Rita Mountains, we flew above the great Pantano Wash, an area of rubble, stone and sand; a river bed, evidently produced by infrequent cloud bursts. Only the wild rush of angry waters could produce such an enduring scar upon the face of nature. Coming into Tucson, we encountered the worst air currents of the trip and I was given a practical demonstration of the value of the safety belt. We didn't linger in Tucson, waiting only to be refueled; set our clocks back one hour and took off at 3:05 western time to continue our race with the sun.

Coming out of Tucson, we worked up immediately to an elevation of 8,500 feet and set our course westward through the valley between the Tortolita and Tucson Mountains. Our line of flight carried us up an aisle between high peaks, still following the Southern Pacific, which parallels the Lone Star Trail, an automobile highway. On every hand was sand and barren mountains, painted chrome, brown and violet by mineral deposits. Occasionally a stream struggled through the dry valleys, its course marked by a narrow strip of verdure, mesquite and cottonwood trees.

Soon ahead of us rose the Maricopa Mountains. These we crossed through a gap at Estrella Hill and brought into view the Gila River and mountains of the same name to the north. Our course now took us along the line of demarcation between that part of Old Mexico which was ceded the United States by the treaty of Guadalupe Hidalgo and that lying to the south of the Gila River as far west as its junction with the Colorado, which formed a part of the Gadsden Purchase. Undoubtedly there existed sound political reasons for the purchase of this particular strip and, of course, the projected Southern Pacific Railroad did need a suitable



Marine Aircraft Squadrons, West Coast Expeditionary Force, Naval Air Station, San Diego, California

right of way in those parts. Still from the air it looked very much as though Uncle Sam got well stung unless he was out to corner sand, scorpions, horned toads, centipedes and geographical cussedness. The strip includes such choice bits of real estate as the great Yuma Desert and the Chugulla Desert. In the future, irrigation may make this land blossom, as it has the Imperial Valley a short distance west. Throughout the mountains of this region for one hundred years preceding the surrender of Geronimo, the terror of the Indians was ever present in the minds of the settlers, but with the passing of that wily racketeer and his lieutenant, Nachez, peace and security at last came to this turbulent section.

Rushing westward, we bore down at a great rate upon Yuma, leaving to our right the Castle Dome Mountain, alight in the afternoon sun, its facets seeming like lighted windows and the whole mass a great, eerie castle glowing and inhabited. At Yuma we crossed the great Colorado River, nearing the end of its 2,000 mile journey to the Gulf of California. From Yuma we struck across almost fifty miles of continuous white, sandy desert, and then abruptly entered the irrigated area at the south of the Imperial Valley of California. Near El Centro, we obtained a splendid, if distant, view of the Salton Sea. In this section for about thirty miles, we had beneath us verdant farm lands covered with crops, each of the great fields outlined by irrigation ditches. This area is down to sea level, and the Salton Sea is at its shore line about two hundred and fifty feet below the level of the Pacific Ocean.

Leaving El Centro behind us, we again took up our climb to clear the mountains ahead, flying at 11,000 feet. Superstition Mountain reared its peak like a great pipe organ on our right. Here we met our first cloud effects since leaving Dallas. The sun dropping in the west seemed quick to seize this opportunity to provide the stranger with something big in the way of chromatics, its last rays piercing the scattered clouds to play upon the mountain peaks, providing us with a riotous color display. Beneath us were innumerable valleys filled with gold-colored mist. We soon began to suffer rather acutely from the cold. In our haste to leave Tucson we had not waited to put on our heavy flying jackets, and as a consequence we shivered and shook most of the way to San Diego. At a speed of approximately 180 miles an hour, we raced directly into the glory of the sunset. As we cleared the last range, the Ysidro and Laguna Mountains, we started on our long dive for San Diego. The sun dropped into the ocean, darkness closed in beneath us, deep in the shrouded Paradise Valley, the airway beacons blinked encouragingly to guide us on our way. Far ahead a shimmering pool in the lingering daylight marked the Pacific Ocean. Then, San Diego glowing in the distance.

It was an inspiring sight as we dove at high speed toward the city; ropes, clusters and geometric figures picked out in electric lights emerging from the illumination as we drew near, until below lay a surpassingly beautiful display of jewels. San Diego Bay, riding lights of a hundred ships of war, and North Island lay below us, marked by so many red "obstruction" lights that to the unpracticed eye we seemed confronted with a difficult landing. But Lieutenant Smith picked his spot, came down easily upon the field, and the day's flight, begun at 7:15 a.m., at Shreveport,

Louisiana, ended at 5:50 p.m., at San Diego, Calif. The total distance covered during that day was at least 1,400 miles, which, for a standard scouting plane, was a splendid performance.

We taxied up to the hangar, one plane following the other, and soon piled out to congratulate each other on the successful conclusion of our journey. As my nephew, who met me, expressed it, "You all got out of the planes and began to yell at each other." We failed to realize at first the effects of the long flight at high altitude, and the rapid descent to sea level. We were quite deaf and didn't know it; however, the effect was not uncomfortable and passed off immediately. It had been a glorious day, one filled with interest and amusement, blessed by wonderful visibility—the unaided eye could cover a strip of 200 miles in this rush westward over Texas, New Mexico, Arizona, and California.

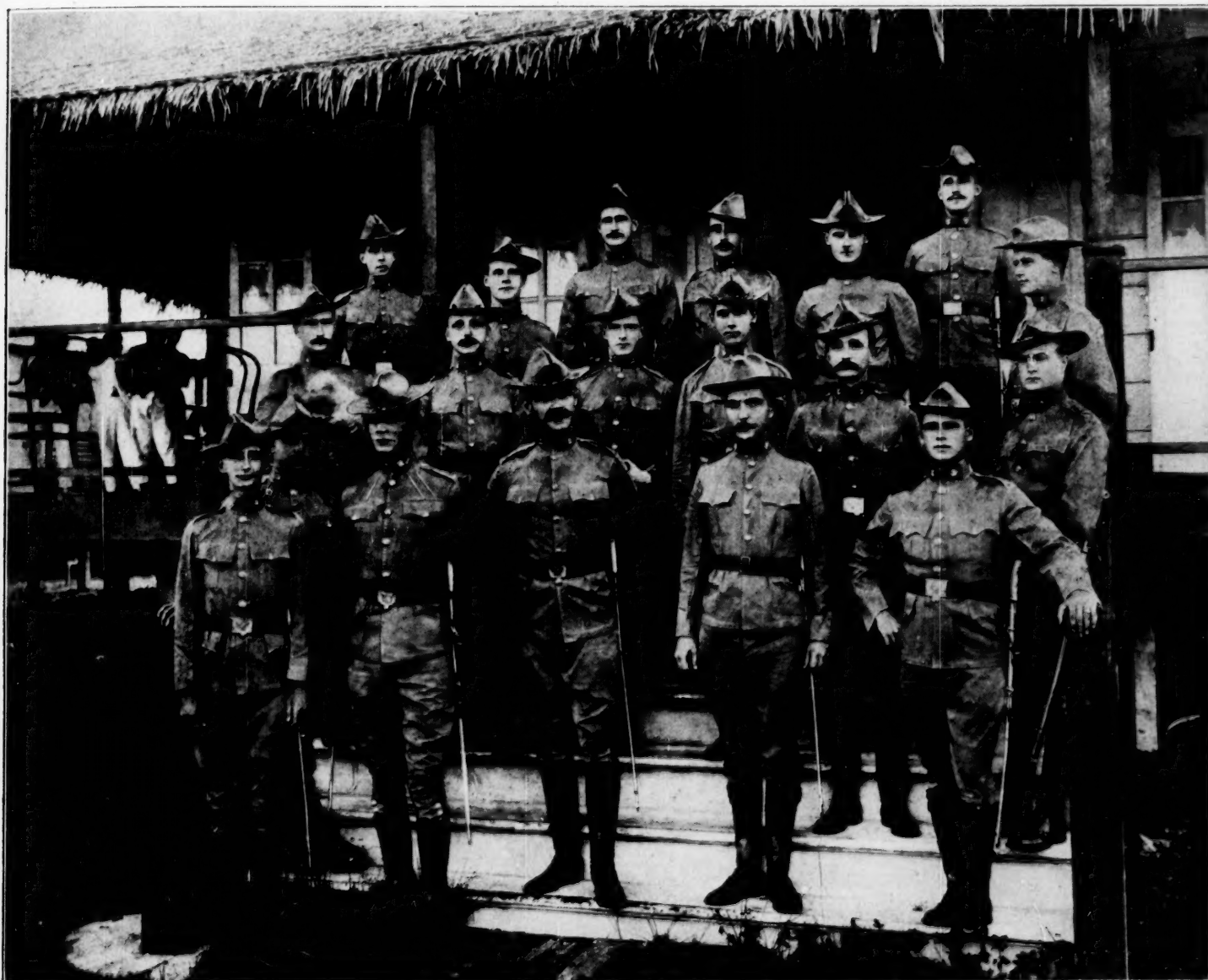
One fact, a poignant one, was borne upon me as a result of this long ride. In my whole experience there is no other object so unyielding, so uncompromising to sit on, as a parachute. The major part of this day I wriggled and twisted within the confines of my safety belt in a futile effort to alleviate my discomfort; but it was all in vain. I am convinced that the prize for uncomfortable seats goes unquestionably to the parachute.

The acquisition of California as a part of the United States is a story fraught with interest. During the doubtful years from 1845 to 1847, when the question of the final acquisition of California hung in the balance, the Marine Corps, as a part of the Navy, played an active role. Here in this smiling country were organized several troops of "Horse Marines" to operate extensively under the direction of the Navy. Through these troublesome times march the figures of Commodore Jones, Sloät, and Stockton, as well as Kearney, John C. Fremont, Kit Carson, and of the Marines, Zeilin, afterwards Commandant of the Corps, and last but in no wise least, Lieutenant Gillespie. The story of the Journey of Gillespie from Washington to Monterey, through the heart of convulsed Mexico, bearing secret and vital despatches from President Polk to Commodore Sloat, as the confidential agent of the President of the United States, requires an Elbert Hubbard to write a new "Message to Garcia." With great discretion, tact, and in the face of constant personal danger, Gillespie executed his mission and was one of the prime factors in saving California to the American Union.

San Diego has a beautiful harbor, the long protecting arm of Point Loma and the Silver Strand that connects Coronado with the mainland providing ample space and placid waters for the Fleet. In scattered hours of leisure I snatched the opportunity of visiting Agua Caliente, much more beautiful than wicked, and Tia Juana, much more wicked than beautiful. The beauty of Agua Caliente and the city of San Diego is enhanced by their natural settings, and where millions have been spent, nature has lent itself to aid in the attractiveness of the completed picture.

There is something about California that to this writer is gay, vivid, and sprightly. Whether it is the spacious cities, the picturesque little towns that rise in the hills, the white-walled houses with the red tile roofs, or the tangy air laden with the perfume of flowers, and the gentle, aromatic odor of the Eucalyptus trees—whatever it is, I always feel more alive in California than elsewhere. I had been away eighteen years and was delighted to be back again, if for only so short a period.

IN "THE DAYS OF THE EMPIRE"



Officers of the Second Marine Regiment at Olongapo, P. I., in 1903

From left to right, 1st row: Lieut. Thomas A. Mott, Lieut. Frank Halford, Lieut. Richard S. Hooker, Major Lincoln Karmany, Lieut. George H. Mather, Lieut. Harry Lay; 2d row: Lieut. Harold C. Reisinger, Captain Arthur T. Marix, Capt. Artur J. Matthews, Lieut. Chandler Campbell, Lieut. Benjamin F. Rittenhouse, Lieut. H. L. Roosevelt; 3d row: Lieut. Presley M. Rixey, Lieut. R. P. Williams, Lieut. D. C. McDougal, Lieut. R. R. Wallace, Lieut. F. L. Benton, Lieut. W. A. Pickering, Lieut. Frank E. Evans.



CLASS OF 1892, SCHOOL OF APPLICATION, MARINE BARRACKS, WASHINGTON, D. C.

From left to right: First Lieutenant Thomas C. Prince, Second Lieutenant Robert McM. Dutton, Second Lieutenant Lewis C. Lucas, Second Lieutenant Julius Prochazka, Second Lieutenant Edward R. Lowndes, Second Lieutenant Ben H. Fuller, Second Lieutenant Charles G. Long, Second Lieutenant Bertram S. Neumann, Captain D. Pratt Mannix. Captain Mannix was Commanding Officer, First Lieutenant Prince was Instructor and the second lieutenants were student officers.

The Education of a Marine Officer

BY BRIGADIER GENERAL DION WILLIAMS, U.S.M.C.

■ Prior to the year 1882 vacancies in the lowest grade of commissioned officers in the Marine Corps, that of Second Lieutenant, were filled by the appointment of civilian candidates by the President acting upon the recommendation of the Secretary of the Navy. There was apparently no set standard of educational qualification and while many of the appointees were young men of good education some of them, according to the anecdotes passed down by tradition, depended more upon political connections than upon educational fitness.

In these olden days there were various methods employed to inculcate into the tyro officers that donned the uniform of second lieutenant a knowledge of the "School of the Soldier" and the "Art of War," the efficiency and thoroughness of such vicarious methods depending largely upon the energy and efficiency of the Post Commander. There was no set standard and no regular courses of instruction for all officers such as exists today with our multiplicity of schools and curricula. In spite of this lack of educational facilities history does demonstrate that from 1775 to 1882 the Marine Corps was officered in a manner to produce soldiers that could fight with the weapons of the time on a par with any soldiers then extant and leave after them

traditions which we still celebrate when we sing "From the halls of Montezuma to the shores of Tripoli."

Again, it may be that today we are becoming, as one hard-boiled old officer of my acquaintance puts it, "over educated and under trained," with our schools for this and that specialty, our schools for service here and there, "land, sea and air," and our courses of education in the military art that makes a student of an officer for a large percentage of his service even though it may never succeed in making a scholar of him. However, criticism of the system of olden times or of the system in vogue in this highly scientific day of technocracy is by no means the aim of this story. Rather, it is the aim to record in simple terms an account of the schools, past and present, that have been provided in order that the officers of the Marine Corps may be kept abreast of the times in military thought and study.

An Act of Congress dated August 5, 1882, prescribed that thereafter vacancies in the grade of Second Lieutenant in the Marine Corps, as in the grades of Ensign and Assistant Engineer in the Navy, should be filled from the successful graduates of the current classes of Naval Cadets of the U. S. Naval Academy, and on July 1, 1883, ten members of the "famous class of 1881"

received their commissions as Second Lieutenants in the Marine Corps, all educated to a standard and molded to a pattern by four years at the Naval Academy and two years at sea.

These new lieutenants were ordered to shore stations and put through such local training as their commanding officers might see fit for a term and then "turned over for duty," as the phrase of the day had it, and allowed to do duty as Officer of the Day at the Navy Yards.

This method of recruiting the officer ranks of the Corps from the graduates of the Naval Academy continued until 1899, when the expansion resulting from the Spanish-American War made it impossible for that school to furnish the number required and a new method was provided by Act of Congress dated March 3, 1899. This law directed that the grade of second lieutenant should be filled by the appointment, first, of graduates of the Naval Academy, second, by commissioning young men who had served creditably as volunteer officers during the late war with Spain, third, by the selection of meritorious non-commissioned officers, and fourth, by appointments from civil life. This method has been followed practically to the present except for the second above mentioned source of procurement.

The procurement of officers from the Naval Academy in 1883 and thereafter for a number of years who had all enjoyed the advantages of a standard course of what may be termed basic education for their duties, and the establishment of various postgraduate schools in the Army and the Navy led to the establishment in the Marine Corps of a school for newly commissioned second lieutenants of the Marine Corps where all might have the advantages of uniformity in training and military education, and this brings us down to the year 1891.

In that year Charles Heywood became Colonel Commandant of the Marine Corps and entered with a zest into the duties of his new office. A veteran of two wars, he fought under Commodore Selfridge on the west coast of Mexico in 1847-48 aboard the U. S. S. *Portsmouth* and was in command of the Marines who manned the two after guns of the historic U. S. S. *Hartford* when she flew the flag of Admiral Farragut at the Battle of Mobile Bay, and he doubtless heard the Admiral's stirring command, "Damn the torpedoes, go ahead!" ever since a proud slogan in our Navy. It appears to be typical of the man and the officer that the first general order issued by him to the Corps which he was to command with great distinction for a period of twelve eventful years should have been one to establish a school for officers and non-commissioned officers destined to fit them for their future duties under a new mission to come in 1898 with the Spanish-American War.

1. THE SCHOOL OF APPLICATION

This was the first school in the Marine Corps for the education of officers pursuant to a carefully planned course of study having a fixed schedule. No better description of the reasons for its establishment, its aims and intended scope can be given than that contained in Colonel Heywood's order:

GENERAL ORDER NO. 1

HEADQUARTERS, U. S. MARINE CORPS,
Washington, D. C., May 1, 1891.

1. The Colonel Commandant takes pleasure in formally announcing to the Marine Corps the establishment of a School of Application at the headquarters of the Corps, with the approval of the Secretary of the Navy, as contained in the following communication:

"NAVY DEPARTMENT,
"Washington, April 18, 1891.

"Sir: The Department is in receipt of your communication of the 13th instant, submitting for its consideration an outline of the course of instruction for a school of application, at the headquarters of the Marine Corps, for officers, non-commissioned officers, and privates of the Corps; and the course of instruction for the school, as proposed, is, in accordance with your recommendation, approved.

"Very respectfully,

"B. F. TRACY,
"Secretary of the Navy.

"The Commandant, U. S. Marine Corps,
"Headquarters, Washington, D. C."

2. Outline of course of instruction:

1st. Infantry tactics and small-arm instruction.—To include the school of the soldier; school of the company; school of the battalion, and evolutions of the brigade; bayonet exercise; instructions for skirmishers; trumpet signals; ceremonies, and guard duty; position and aiming drills; target practice; estimating distances, and pistol practice.

2d. Gunnery instruction.—To include machine and rapid-fire gun drills; naval great-gun exercise; nomenclature and description of guns, carriages, mounts, and gun implements; description and mode of manufacture of gunpowder, projectiles, cartridges, fuses, and primers; pointing, sighting, sights, and range finding.

3d. Torpedoes.—The various kinds and their uses; how exploded, how used offensively and defensively.

4th. High explosives.—Gun cotton; nitro-glycerine; dynamite; fulminates, how prepared, preserved, used; care necessary in handling.

5th. Electricity.—How produced; conductors and insulators; heating effects of currents, how applied to fire guns and torpedoes; simple electrical tests and measurements; telegraphy.

6th. Field service and modern tactics.—Exercises in application in summer camps; marches; duty of advanced guards; camps and bivouacs; outpost duty; patrols; signaling; street, bush, and open-country fighting; formations for attack and defense; importance of cover; care of wounded; application of the tourniquet.

7th. Field intrenchments.—To embrace the making on the ground of rifle pits, shelter trenches, gun pits, obstacles, and improvised field defenses.

In addition to the foregoing, non-commissioned officers and other enlisted men of sufficient intelligence will receive careful instruction in the use of the logarithms, solution of plane triangles, and the practical use in the field of angle-measuring instruments in making military reconnaissances and hasty surveys.

Non-commissioned officers will be instructed also in the duties of guards when embarked, landing and campaigning with the Naval brigade, and the best formation for fighting against superior numbers armed with inferior weapons.

Additional instruction for commissioned officers is left to the discretion of the Colonel Commandant.

DESIGNATION

3. The school is officially designated the "School of Application of the United States Marine Corps," and it will be under the direct care and supervision of the Colonel Commandant.

ORGANIZATION

4. The School of Application shall consist of a Director of Instruction, who shall have the immediate command of the school and post, instructors and assistant instructors, and such officers and enlisted men as may be assigned to it for duty or instruction.

5. The school shall have two divisions, one for commissioned officers and one for enlisted men.

ADMINISTRATION

6. Instructors and assistant instructors shall, as far as practicable in the judgment of the commanding officer of the school, be exempt from all duties that will in any way interfere with their preparation for and proper performance of duty as instructors and assistant instructors.

7. Instruction will be given according to a regular program, and in such manner and by such methods as the Colonel Commandant may hereafter prescribe, and which will be duly announced in general orders.

8. The instruction as prescribed shall be obligatory for all commissioned officers and non-commissioned officers, and for such other enlisted men as may be assigned to the school for duty or instruction.

9. The course of instruction in military hygiene will be under the direction of the medical officer of the post.

10. Instructors and assistant instructors shall keep marks of all recitations and exercises, and shall submit the same at the end of each week to the Director of Instruction, who will forward them to the Colonel Commandant as a part of the weekly report of progress.

These marks will be used as aids in determining questions of merit and proficiency.

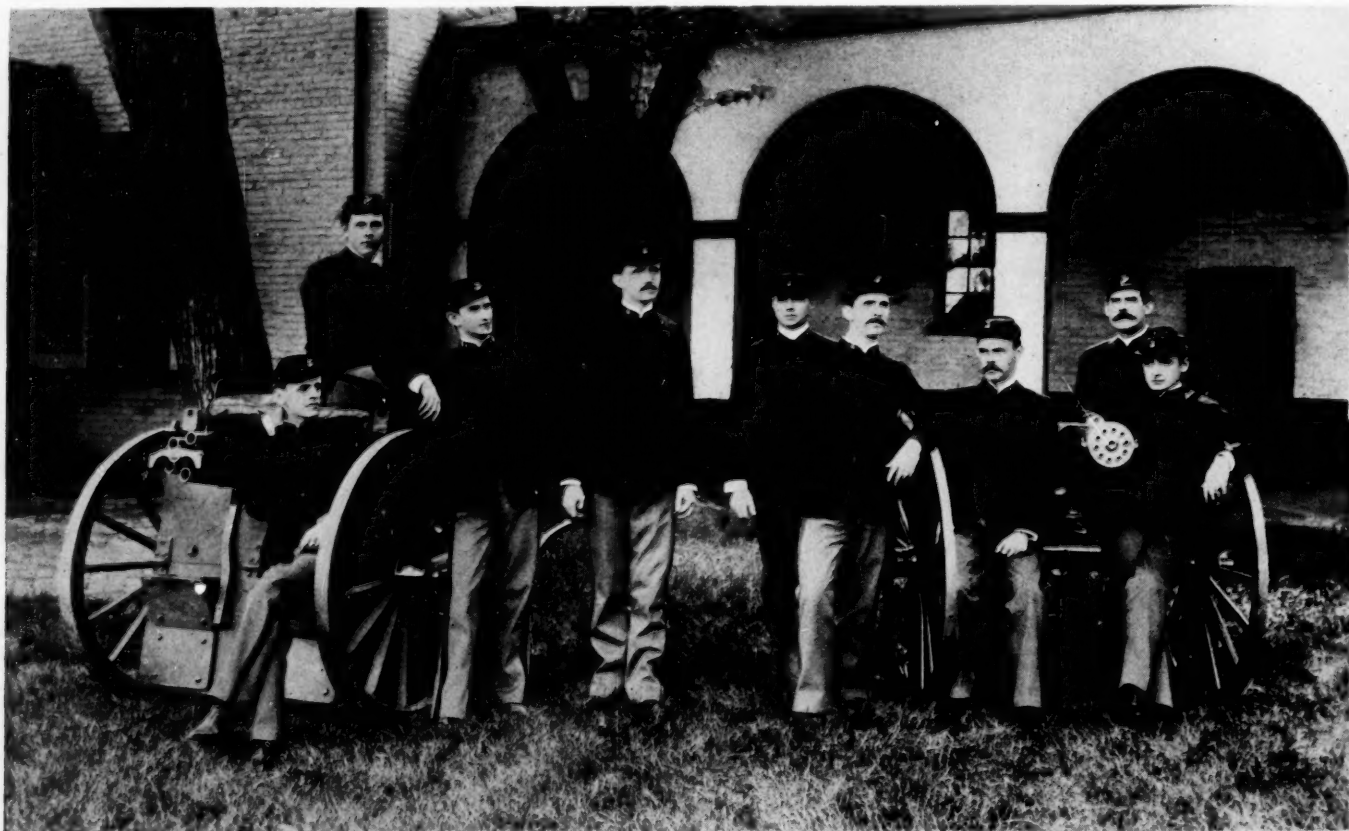
11. Maximum marks given for perfect recitations and exercises shall be 4; for a total failure 0; and between these limits, according to quality, fractions expressed in tenths.

12. A board of three officers, to be designated by the Colonel Commandant, shall be appointed to attend and witness the examinations at the close of each course of instruction at the school.

It shall be the duty of the board to examine into the actual condition of the school respecting its discipline, the methods of instruction employed, etc. The board shall report its observations and make any recommendations it may deem advisable to the Colonel Commandant.

13. The commanding officer of the school will make to the Colonel Commandant an annual report of the progress and wants of the school, and he will recommend such alterations in and additions to the program of instruction and code of regulations as he may from time to time consider necessary or advisable.

14. With the course of instruction, as outlined for the School of Application, and a modified course for branch schools at each post, together with the instruction officers are able to impart to their guards on board



CLASS OF 1894, SCHOOL OF APPLICATION, MARINE BARRACKS, WASHINGTON, D. C.

From left to right: Second Lieutenant Dion Williams, Second Lieutenant George Richards, First Lieutenant Wendell C. Neville, Second Lieutenant Rufus H. Lane, First Lieutenant Harry K. White, Second Lieutenant William N. McKelvy, Second Lieutenant Albert S. McLemore, Captain Paul St. Clair Murphy, Second Lieutenant Elisha Theall. Captain Murphy was commanding officer, Lieutenants White and Neville were Instructors and the second lieutenants were the student officers.

ship, the Marine Corps will be enabled to keep pace with recent progress in the profession of arms, and to this end the Colonel Commandant confidently relies upon the cooperation of all the officers of the corps.

CHARLES HEYWOOD,
Colonel Commandant.

The School of Application was established in accordance with the order of the Colonel Commandant at the Marine Barracks which was at that time the Headquarters of the Corps, and the first class to take the course reported on September 1, 1891, and took up the course. This class consisted of the seven Second Lieutenants commissioned July 1, 1891, from the Naval Academy Class of 1889, who had just completed their two years' term at sea. Its members were Second Lieutenants Lewis C. Lucas, Bertram S. Neumann, Charles G. Long, Ben H. Fuller, Robert McM. Dutton, Julius Prochazka and Edward R. Lowndes.

In the report of the first commanding officer of the new school the advantages of the place selected for the school were recited as follows: "The Headquarters of the Corps has special advantages not possessed by any other place for a school of practice. Here student officers and men are comparatively free from the cares of guard duty, except so much as may be necessary for instruction, and in consequence display more interest in their drills and studies and have more time to devote to them. The naval experimental ground for ordnance at Indian Head is of easy access, as is the naval magazine with its excellent range for target practice, and a few miles back of the Potomac's eastern branch the country is well adapted for field training. The navy yard and gun foundry are conveniently at hand, combining a water front admirably suited for instruction in boat pulling and sailing with the advantages afforded by the gun shops of acquiring a practical knowledge of the manufacture of guns, carriages, etc., not to be obtained elsewhere. The school has also the services of the corps band, which it could enjoy at no other station, and it has moreover at headquarters the personal care and supervision of the commandant of the corps."

The scope of the courses of study instituted at the school is shown by the following program of instruction.

DIVISION FOR COMMISSIONED OFFICERS

For purposes of administration and convenience in instruction the course was arranged in seven departments, the course in each department being both practical and theoretical with the preference given to the practical as far as it was found possible to do so.

I. DEPARTMENT OF INFANTRY

The Infantry course was divided into four parts, embracing the drill instructions, guard duty, small-arms firing regulations, and infantry fire discipline, and consisted of recitations, drills, problems and field exercises, in detail as follows:

Part I. *Infantry Drill Instructions*. Definitions; general regulations; school of the squad; school of the company; school of the battalion; evolutions of the brigade; extended order drills; formation for street riots; ceremonies; signals.

Part II. *Guard Duty*. Rosters; the officer of the day; the officer of the guard; the sergeant of the guard; the corporal of the guard; the soldier of the guard; orders for sentinels on post.

Part III. *Small-arms Firing Regulations*. Care of rifle; dismounting and assembling; sighting drills; po-

sition and aiming drills; gallery practice; general regulations for range practice; details for individual practice; suggestions for riflemen; skirmish firing; volley and file firing; targets; ranges; marking and scoring; classification; motion of bullets; variations in the trajectory; the trajectory as affected by atmospheric conditions; the effects of fire; measuring distances by pacing; estimating distances by sight; estimating distances by sound; pistol practice.

Part IV. *Infantry Fire Discipline*. Long range versus short range fire; supply of ammunition on the battlefield; observations on supplying ammunition; uncontrolled and controlled fire; fire discipline and the control and direction of fire; the distance at which fire should be opened and the number of cartridges to be used to obtain a definite object; determination of the force required; choice of ground; the selection of the objects; determination of range and sights; the kind of fire to be used; advantages and disadvantages of mass and volley firing; intensity of fire; the attitude of the men; the observation of the results; when men in movement may fire; number of rounds to be fired at each halt; when bayonets should be fixed; fire units; tactical deductions.

II. DEPARTMENT OF ARTILLERY

The artillery course was divided into two parts, artillery drill instruction and naval gunnery, and consisted of drills, recitations and practical exercises.

Part I. *Artillery drill instructions*. General rules; school of the section horsed and with the drag; school of the battery.

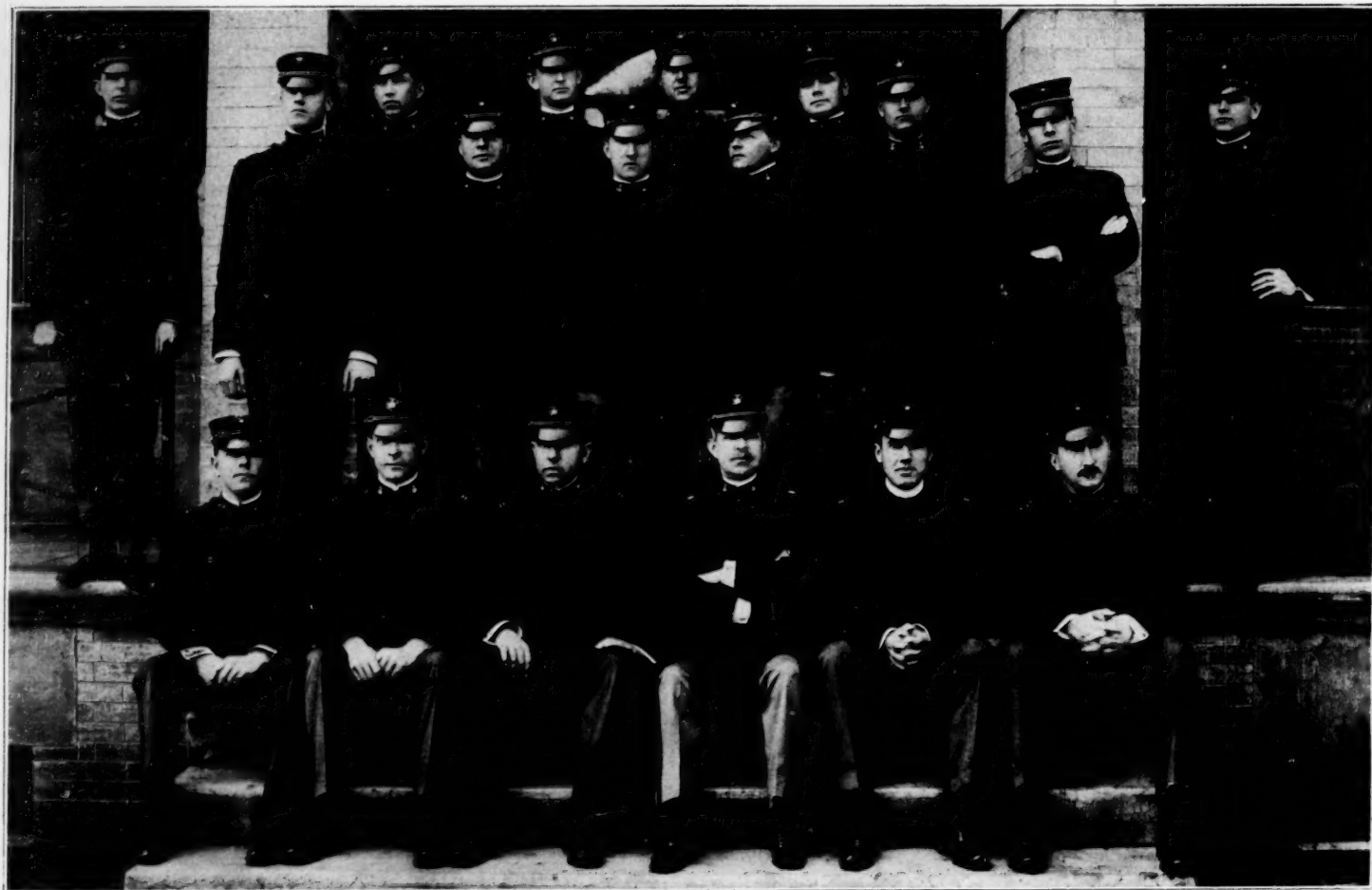
Part II. *Naval Gunnery*. Care, nomenclature and description of guns, carriages, mounts and gun implements; drills of main and secondary batteries; dismounting and assembling the mechanism of machine and rapid-fire guns; description and mode of manufacture of projectiles; charges, fuzes and primers; the theory and practice of pointing; explanation of sights, concentration of fire and when to use the various kinds of projectiles; employment against torpedo boats and in field and landing service; mounting and dismounting of guns; subcaliber practice; exterior ballistics; the practical use of instruments in determining pressure, velocity, time of flight and range.

III. DEPARTMENT OF ADMINISTRATION AND SEA SERVICE

This course was divided into two parts, military administration and sea service, and consisted of recitations and exercises in application.

Part I. *Military Administration*. General principles of administration in the U. S. Marine Corps; the system of recruiting; care of property and supplies; system of accountability for money and property; transportation of men, munitions and supplies by rail, steamer, or wagon; military and naval regulations; orders and reports, correspondence in general, and returns.

Part II. *Sea Service*. Embarking and disembarking; interior discipline; care of small arms and accoutrements; routine; mess arrangements; official intercourse; military etiquette; duties of non-commissioned officers; special duties of first sergeant; of non-commissioned officer on guard, of orderlies and of sentinels; nomenclature of ships; parts and fittings of boats; boat-pulling and sailing; swimming; slinging and lashing hammocks; making knots, splices and hitches; the application of pulleys, blocks and tackles.



STAFF AND CLASS, SCHOOL OF APPLICATION, ANNAPOLIS, MD., 1906.

Officers of the Staff, seated left to right: First Lieutenant W. G. Fay, Captain D. P. Hall, Captain J. H. Russell, Major F. J. Moses, Captain George C. Thorpe, Captain Harold C. Reisinger. Officers of the class, standing left to right: Second Lieutenants W. W. Buckley, Julian P. Wilcox, Benjamin B. Gossett, H. B. Pratt, Bennet Puryear, Jr., Robert L. Denig, Logan Tucker, Henry S. Greene, Randolph Coyle, C. F. B. Price, William C. Wise, Jr., Charles S. McReynolds.

IV. DEPARTMENT OF LAW

This department covered the subjects of military law and court-martial procedure.

Part I. *Military Law*. Military law proper; the subjects defined and divided; constitutional provisions; the written military law; the unwritten military law.

Part II. *Court-Martial Procedure*. The court-martial; constitution and composition of general courts-martial; the jurisdiction thereof; the procedure thereof; arrest, the charge, assembling and opening the court; duties of president and members and judge advocate; challenges, organization, pleas and motions; the trial; evidence; the finding, sentence and punishment; action on proceedings by reviewing authority; summary courts-martial; courts of inquiry.

V. DEPARTMENT OF TORPEDOES

This course was divided into four parts with details as follows:

Part I. *Torpedoes offensive and defensive*. Description of various kinds of torpedoes, mechanical, electrical, contact and ground, with their advantages and disadvantages and how used offensively and defensively; nomenclature and use of instruments and gear in ship's torpedo outfit; preparation of the service spar torpedo and contact gun cotton torpedo for use; methods of defending a harbor by torpedoes of various

sizes and kinds; how to find the size of charge required, depth at which effective and space between torpedoes; filling and planting torpedoes; arranging cables and buoys; firing and observing stations and arcs; position finders; circuit closers; enemy attack on torpedo fields and how to defend them; description and use of land torpedoes; descriptions of Whitehead and Howell torpedoes.

Part II. *Torpedo Fuzes*. Mechanical and platinum wire fuzes for gun cotton, how made and used; size and number of fuzes necessary and their position in the charge; electrical fuzes.

Part III. *Electricity*. How electricity is produced; conductors and insulators; its application to torpedo work; how applied, to fire guns, for lighting purposes, for telegraphy; the Laclanche and other batteries, their manufacture and care; testing room instruments; the Wheatstone bridge and its use; electrical tests for cable insulation, conductivity and resistance.

Part IV. *Explosives*. Gunpowder, composition, kinds, manufacture, care; principles of explosion; size and form of grains. High explosives: gun cotton, nitroglycerine, dynamite, fulminates; how prepared, preserved and used; peculiarities of each; effects of explosion; care in handling.

VI. DEPARTMENT OF ENGINEERING

This department was divided into four parts in detail as follows:

Part I. *Topography*. Construction of scales; copying, enlarging and reducing maps and plans; conventional signs; terms used in describing hills; representation of hills; scales of horizontal equivalents; sections; making use of plans on the ground; measurement of distances; the plane table and its use; the prismatic compass and the protractor; their uses in intersection and resection; magnetic variation; traversing with compass and field book; plotting and traversing with field note book; traversing with the plane table; hill and mountain sketching; sketching without instruments; reading contoured plans; reconnaissance of a position, sketch and report; sketching on horseback; the vernier and the pocket sextant, adjustment and use; the theodolite, its construction and use; levelling; trigonometrical surveying.

Part II. *Field Engineering*. General principles and definitions; clearing the ground; hasty entrenchments; obstacles; defense of posts; field level and field geometry; deliberate entrenchments; field casemates; brushwood; revetments; working parties; siege trenches; roads; cordage and use of spars; bridges; floating bridges; camping arrangements; hasty demolitions.

Part III. *Signalling and telegraphy*. Instruction in signalling and telegraphy as prescribed in Navy Department general orders; use of flag, torch, lights and signal disks.

Part IV. *Military Hygiene*. Definition; clothing; lodgment of troops; camps; bivouacs; cleanliness; water tests and purification; first aid to injured; the best and most expeditious manner of treating gun-shot wounds, poisoned wounds, frost bites, bruises, dislocations, hemorrhage and bone fractures; application of tourniquet; restoration of the apparently drowned.

VII. DEPARTMENT OF MILITARY ART

This course was divided into three parts in detail as follows:

Part I. *Minor Tactics*. General principles and definitions; security and information; reconnoitering duties; time and space; advanced guards and outposts; principles of attack and defense; employment of infantry, cavalry, artillery; rear guards and marches; rivers and defiles; villages and woods; convoys; night attacks.

Part II. *Grand Tactics*. General considerations; division of armies into arms; infantry, its role, armament, tactical units, formations and maneuvers; cavalry and artillery, under similar considerations; combined action of the three arms in battle. Influence of the ground upon tactics; positions, their flanks, front, approaches, interior, and rear; detached advanced posts; occupation of ground and proportion of troops to space; tactical marches; the element of time in military movements; orders of battle; engagements, offensive and defensive; principal tactical combinations; phases of battle; surprises; attack of strong points; coups de main.

Part III. *Strategy*. Definition and objects; general principles of warfare; the theatre of operations; bases of operations; strategic lines and points; fronts of operations; strategic fronts; lines of defense and strategic positions; lines of operation; depot of supplies and their relation to marches; role and importance of railways, roads and telegraph lines; marches of concentration;

strategic front marches, forward and retreat; strategic flank marches; principal strategic combinations with indispensable conditions to be fulfilled; defense of frontiers by sea coasts by forts.

Such was the course of study as planned for the first class at the School of Application and it was carried on for later classes with additions and changes to meet the requirements of improved methods and arms and as dictated by the experience of the school. To the student in the military art today the absence of any reference to "war in the air" will be especially noted, but it must be remembered that it was some years later that the Wright brothers performed "the miracle of Kittyhawk."

From the date of its establishment in 1891 the school continued at Headquarters Marine Barracks, Washington, with a class each year until the Spanish-American War interrupted the even tenor of the school in the spring of 1898. There were consequently no classes at the school for the years 1899 and 1900, but in 1901 a class was ordered to take the course. In 1903 the School of Application was transferred to Marine Barracks, Annapolis, Md., where it remained until 1909, when it was transferred to Marine Barracks, Port Royal, S. C., now Parris Island, and the designation was changed to Marine Officers' School. In 1911 this school was transferred to Marine Barracks, Norfolk, Va., where annual classes were instructed until 1917, at which time the entry of the United States into the World War resulted in a large number of officers being taken into the service from civil life to become temporary officers. Schools for the necessary instruction and indoctrination of these new officers for war service were established at Mare Island, Cal., Parris Island, S. C., San Diego, Cal., and the Marine Corps Rifle Range at Winthrop, Md., and the School of Application went into the history of the past.

It may be of interest to note the personnel of the classes at the school from 1892 up to the outbreak of the Spanish-American war in 1898.

Class of 1893: Second Lieutenants Albertus W. Catlin, Lawrence H. Moses, Wendell C. Neville, Cyrus S. Radford, and Thomas C. Treadwell.

Class of 1894: Second Lieutenants Dion Williams, Rufus H. Lane, Albert S. McLemore, Elisha Theall, George Richards and William N. McKelvy.

Class of 1895: Second Lieutenants William C. Dawson, Theodore H. Low, Walter Ball, Austin R. Davis, John H. Russell, Charles F. Macklin, and Thomas S. Borden.

Class of 1896: First Lieutenant T. N. Wood, Second Lieutenants John T. Myers and Louis J. Magill.

Class of 1897: First Lieutenant Lincoln Karmany, Second Lieutenant Melville J. Shaw.

Class of 1898: First Lieutenant Charles A. Doyen, Second Lieutenants P. M. Bannon and N. H. Hall.

A comparison of the curriculum and expected results from the application thereto of the efforts of the students at the first Marine Corps Officers' School with the Marine Corps Schools of today may be readily made by those officers having a knowledge of the present school by reference to the questions propounded to the first class in 1892 upon the completion of their course of study, which were as follows:

FINAL EXAMINATION QUESTIONS

I. INFANTRY AND ARTILLERY

1. Name the principal parts of the breech mechanism of the Springfield rifle.
2. Give the principles of aiming and define line of fire, line of sight, the natural line of sight, point blank, and artificial point blank, with sketch.
3. Give the formation of a company of infantry, and the posts of officers and non-commissioned officers in line, in column of sections, and of fours.
4. Give the formation in line of a battalion of four companies of infantry, with posts of officers and non-commissioned officers.
5. Give the rules for successive formations.
6. Having a battalion of infantry in line, name the different methods of forming it into column, and the methods of returning again into line.
7. Give general rules for evolutions of the brigade.
8. Give the rules for firing in extended order.
9. Describe the use of cover.
10. Give the battle formation of a company and the positions and duties of the officers.
11. Give the battle formation of a battalion, with general rules for the battalion in action.
12. Give general rules for formation for street riots.
13. How are distances measured by pacing, and how estimated by sight and by sound?
14. Give the manual for Colt's double-action navy revolver, with brief description of revolver practice.
15. What does a section of artillery comprise horsed, and with the drag?
16. Give the posts of the chief of section, the gunner, and the caisson corporal in line, column of platoons, column of sections, and files.
17. How are the gun detachments marched to the battery and posted?
18. How are the gun detachments marched from the battery?
19. Station the gun detachment at the drag and prepare the piece for action to the front.
20. Give the special duties of numbers 1 to 8, inclusive, at the Gatling when it is brought in battery.
21. Describe briefly the improved Gatling gun.
22. Give the words of command for a 37-millimeter Hotchkiss gun, mounted in place and lashed, as well as clamped against elevation and train, with the duties of a gun detachment of four men.
23. Explain how to dismount and reassemble the mechanism of the 37-millimeter Hotchkiss gun.

II. DUTIES OF MARINES EMBARKED

24. Give a general outline of the duties of marines aboard vessels of war.
25. By whose orders are posts established, and through what official channels do sentinels receive their orders?
26. Under what circumstances are the members of a marine guard justified in acting as preservers of peace, though not acting under direct authority of a commissioned officer?
27. Through what official channel does an enlisted man make a request for redress in case of any real or imaginary injustice done him, and to whom does he make such appeal?
28. From whom do sentinels in charge of the brig receive orders in reference to the receiving or discharging of prisoners?
29. Where is the marine guard usually formed, and

to whom does the officer report his guard at general quarters?

30. What are the stations and duties of the men at fire quarters? At night quarters?

31. When and how do enlisted men salute superior officers?

32. What is the duty of the non-commissioned officers toward members of the guard, especially those who have not before been at sea?

33. State some of the chief duties of the first sergeant.

34. Mention some of the duties of the non-commissioned officer on guard.

35. What are the usual special orders for sentinels at the gangway?

36. What are the special orders for the sentinel at the brig?

37. Give the most important general orders for all sentinels.

38. What books, reports, returns, rolls, etc., are kept with the guard? When are returns of property and muster rolls made?

39. Mention the accepted methods and mode of application in the restoration of the apparently drowned.

III. MILITARY LAW AND COURTS MARTIAL

40. By whom may the several courts martial be appointed?
41. Give the number of members required for each court martial.
42. How do you determine the kind of court that has jurisdiction in each particular case?
43. What is necessary to be stated in the specification as to the acts committed, as to persons and as to the time and place?
44. What is a challenge, and how is a question of challenge decided?
45. What is the arraignment of a prisoner, and at what stage of the proceedings does it take place?
46. Give the various pleas which may be made.
47. What is the purpose of cross-examination, and to what is it restricted?
48. May depositions be read in evidence, and if so, under what circumstances?
49. Describe the making up of the record as to its form and substance.
50. What is the mode of procedure when the proceedings of a court are returned to it for revision?
51. Define the word "evidence."
52. State why hearsay evidence is not receivable.
53. When may evidence of character be admitted?

IV. SUBMARINE MINES AND TORPEDOES

54. Describe briefly mechanical and electrical submarine mines, with their advantages and disadvantages.
55. What are the considerations in planning a submarine defense?
56. Give a method of defending a harbor by submarine mines, and show by a sketch where the different kinds should be placed in the channel.
57. Having a depth of 40 feet of water, with soft bottom, how much gun cotton should be put in a mine resting on the bottom?
58. How far apart would you plant ground mines containing 500 pounds of gun cotton, and how far apart mines buoyed from the bottom containing the same charge?
59. Give an approximate rule for spacing gun cotton and gunpowder mines.

60. Give an approximate rule for finding the amount of the charge for any given depth, and for finding the most effective depth for any given charge.

61. What is meant by the radius of destructive effect?

62. Explain how the position of a vessel with reference to any ground mine is determined.

63. What are the component parts of a controlled mine? Give brief description of a circuit closer and its use.

64. Describe briefly the Whitehead torpedo, manner of discharging it, etc.

65. Give a brief description of the Howell torpedo, and state how it is discharged.

66. What is the great defect of the Spar torpedo? What its value under special circumstances?

67. What are the merits to be sought in an explosive for submarine mines and torpedoes?

68. Give the extreme destructive ranges of submarine explosives as determined by Gen. Abbott.

69. What kind of a fuse is necessary to explode gun cotton? Explain how it is made, with sketch.

70. Enumerate the Voltaic batteries required in submarine mine service, and name the principal electrical measuring instruments.

71. Describe the electrical tests for insulation, continuity, and resistance, with sketch.

V. HASTY INTRENCHMENTS, DEFENSES, SIGNALING, ETC.

72. What are the advantages and disadvantages of shelter trenches? What is the best position for them, and what are the points to be attended to in tracing them?

73. Give a sketch of the normal shelter trench, marking all dimensions, and state at what intervals the men should be placed and how the work is accomplished.

74. Give a sketch of a trench to be used in firing kneeling, marking the dimensions.

75. Give a sketch, plan and section, of the German gun pit, and explain its construction.

76. What are the chief points to attend to in the defense of a wall? Explain with a sketch how you would prepare for defense a wall 10 feet high.

77. What considerations govern the shape, distance apart, and position of loopholes in a wall?

78. Explain how you would prepare for defense a line of wall 5 feet high.

79. Explain how a railway cutting might be utilized in the defense of a position, and say which side of the cutting you would elect to hold.

80. Give the American Morse code.

81. Explain how to signal with a flag or torch.

82. Describe the use of signal disks, or wheels, in transmitting messages.

83. What are the essentials for a good camp, and what should be avoided in selecting sites?

84. Give a method for pitching and striking tents.

85. What are the tests for the common impurities of water and methods for purification?

86. What is the best and most expeditious manner of treating, temporarily, gunshot wounds?

87. How would you apply a tourniquet?

VI. MINOR TACTICS AND FIELD SERVICE

A. Reconnoitering duties.

88. What is a reconnoitering party? What is the difference between a reconnoitering patrol, and a party

employed on secret reconnaissance duty? State briefly how each proceeds to attain its object.

89. What is the difference between a reconnaissance in force, and a reconnoitering party?

90. You are ordered to take command of a reconnoitering party of one section of infantry; what precautions would you take, and in what order would you move off, supposing you were in an average inclosed country?

91. What considerations regulate the composition and strength of a scouting party?

92. In reconnoitering an enemy's position, what are the most important points to notice?

93. Describe the different methods by which intelligence concerning the enemy may be obtained, and how reports should be framed and transmitted.

94. You are directed to go forward and reconnoiter a certain length of road which the commander of a force may march by the following day. You come to a village, cross two streams (one by bridge and one by ford), and pass for a mile through a wood. In parts the country on each side is hilly. Give the points in connection with each of these features of country which you would notice in your report.

B. Time and space

95. Give the ordinary formation on the march (on a road) of the three arms. Show by a sketch the length of a column en route, composed of one battalion of infantry, four companies one hundred men each, in fours; one troop of cavalry, ninety-six horses; one battery of artillery, six guns without wagons. Add 20 per cent for opening out on the line of march, and calculate the time which it would take to pass a given point.

96. Give a rough practical rule for computing the space occupied by troops on the line of march.

97. A company of infantry is ordered to arrive at a bridge, distance by road on the map 3 miles 540 yards, exactly at 9 a. m. A second company is to arrive simultaneously at a further bridge, distance on the map 4 miles 350 yards; pace ordinary. When should the companies start?

98. A column of infantry in fours takes two and one-half minutes to pass across an opening under observation; pace ordinary. Calculate the strength of column.

99. A reconnoitering patrol visits a railway station and brings back the following reliable information: "Yesterday a large body of the enemy's cavalry crossed the railway. A small party in advance examined the station and cut the telegraph wires. Then came the main body. The telegraph clerk timed it crossing the bridge; three and one-half minutes were occupied in filing over; the men were four or five abreast; the horses were walking, not trotting, when they began to cross the bridge." From these data calculate the force of cavalry.

C. Advanced guards and outposts

100. As a general rule, what proportion should troops composing an advanced guard bear to the main body? Detail a suitable advanced guard for a division, and show by a diagram how the different arms should be distributed on the line of march.

101. Describe the various means by which the safety of an army on the march and its repose when halted are secured.

102. Describe the duties of the commander of the outposts and of the commander of a picket.

103. What distance should the main body of an army be from the main resistance line of its outposts? Give your reason.

104. What are the duties of sentries on outposts?

105. Show by a sketch the manner of posting a regiment of infantry on outpost duty, to cover the front of a division. Illustrate also a battalion of infantry (four companies) on outpost duty.

106. What is the difference between the cordon system and the patrol system of outposts? On what assumptions are these systems based, respectively?

107. What is the least amount of lateral space that should be covered by outposts; and when should outposts completely surround an army?

108. How should the advanced guard of an army corps marching through an ordinary country act on a report coming in from its scouts that a village, $1\frac{3}{4}$ miles in front, is occupied by an enemy evidently with the intention of holding it? The orders given to the commander of the advanced guard were to push on if possible. Illustrate your answer.

109. How are the flanks of an advanced guard protected when moving in: (a) An ordinary country; (b) a country with continuous heights on one or the other side, and within reach of the roadway; (c) a country with heights much broken on both sides of the road?

110. What should be the composition of the outpost of a force under the following different conditions: (a) In an open country by day and by night, the enemy not being at hand; (b) in a close country when the enemy is near; (c) in a close country when a bridge or defile has to be guarded?

111. How is the posting of sentries, and how are the number and the strength of pickets affected by ground?

D. Principles of attack and defense.

112. What is the best use to make of cavalry when acting on the defensive?

113. In an attack by the three arms combined, how should the artillery act during the different phases of a successful action?

114. Why is it more necessary now than ever that in the attack on a position artillery should have an adequate force of infantry to cooperate with it?

115. Give in general terms the role of the three arms engaged in the defense of a position.

116. Under what circumstances might it become necessary for artillery to expose itself to the fire of the enemy's infantry?

117. What are the general principles on which all attacks should be based?

118. In occupying a position, under whose immediate orders should the general reserve be; and state how, and with what specific objects, it should be posted?

119. Explain why the modern system of defense requires a deeper occupation to be adopted than formerly.

120. State briefly what, in your opinion, are the requirements of a good defensive position.

121. In preparing and carrying out an attack, what special points should be regarded?

122. What are the advantages of the attack over the defense?

123. How ought the defenders to be able to reduce the assailants (assumed to be in considerably superior

numbers), so as to engage them on equal terms with a fair prospect of not merely repelling their onslaught, but of assuming the offensive?

124. The general disposition of infantry for the advance to the "attack" is in three lines. Describe briefly the duties of each line.

125. In defending a position in ordinary country how many men a mile ought there to be? State generally how you would dispose of them.

126. Describe briefly what should take place when troops prepared to act on the offensive encounter a body of the enemy's troops in motion.

E. Employment of infantry.

127. When fighting with savages much superior to us in numbers, should the same formation be used for infantry as when fighting against a civilized enemy? Describe in general terms what formation you would recommend, giving your reasons.

128. At what ranges, in your opinion, may infantry fire be used in the attack on an intrenched position?

129. Under what circumstances may long-range fire be adopted, and what precautions are necessary to obtain the greatest effect from it?

130. What are the advantages of the open order of modern fighting? What precautions are necessary to be observed in its use?

131. In an attack on an intrenched position, what in your opinion, is the proportion that the combatants should bear to one another, supposing both forces to be about equal in *morale*?

132. Describe briefly the principles of infantry tactics in defense.

133. Describe the several stages of action of infantry in the attack of a position.

F. Employment of cavalry.

134. Two squadrons of cavalry are ordered to attack a battery of artillery which has a cavalry escort. How should the commander of the squadrons make his attack?

135. Why should cavalry never attack without a reserve?

136. Show, by a diagram, the attack formation of a cavalry brigade of twelve squadrons; state distances of supports and reserves from first line.

137. What points are essential, and what desirable, to insure success in a charge of cavalry against infantry?

G. Rear guards and marches.

138. You are in command of a rear guard covering the retreat of a defeated army. You find, after some time, that the pursuit of the enemy is slackening; later on you have reason to believe the pursuit has ceased altogether. How would you act in each case?

139. An army is compelled to make a flank march. Three parallel roads are available; the enemy are within striking distance on the right flank. Describe the dispositions you would make for the march of the columns and any other precautions you would take.

140. How is it that the rear guard, which is far weaker than the main body, has power to delay the advance of a victorious enemy? Upon what does this power depend?

141. To what points should the attention of officers be directed in connection with the maintenance of efficiency in the troops during a march?

142. What is a flank march, and on what does its success depend? When is it a dangerous undertaking?

143. In selecting a rear guard position, what points should be particularly attended to by a commander?

144. Suppose a division to be moving along a road and the enemy is known to be at hand, in what order would the several arms, ammunition, baggage carts, etc., march? What difference would be made in the order of march if the enemy were distant?

145. What must determine the composition and strength of a rear guard, and from what troops should it be selected if possible?

146. Why should a rear guard, as a general rule, not make counter attacks, and under what special circumstances may the commander of a rear guard consider it advisable to make one?

147. How, and in what order, should a small rear guard of all arms fall back before a superior force in an open country?

148. What is the object of "timed" marches?

149. In a march of a force of all arms what precautions are necessary to reduce fatigue to the utmost?

H. Rivers and defiles.

150. What are the limits of depth passable in a ford for the three arms? Which would you rather attempt to force, a bridge or a ford?

151. What is the most advantageous position for the defense of a bridge?

(a) Supposing no cover to exist on the enemy's side?

(b) Supposing cover to exist on both sides?

(c) Supposing cover to exist on the enemy's side only.

152. What are the three different positions from which a defile may be defended? Which is usually the best and strongest position to take up?

153. Under what circumstances may it be best not to oppose the passage of an enemy across a river? And when the defenders make up their minds to do this, what is the proper course to adopt to check the enemy?

154. Define a defile in the military sense of the word. State broadly the principal features of defiles?

155. When an obstacle with passages over it (such as a stream, canal, railway cutting, etc.) is found running parallel and tolerably close to a line of outposts, how should such an obstacle be guarded? Show how you would post your pickets and supports.

156. An army is obliged to retire through a mountain defile when an enemy is in pursuit. State in general terms the principles on which such an operation should be conducted.

157. Why should a commander before attempting to throw a bridge over a river look out for—

(a) Cover on the enemy's side?

(b) A bend of the river toward him?

(c) A tributary stream?

158. Are rivers considered formidable barriers or not? State reasons. When is a river line most favorable for the defenders, supposing them to have decided not to oppose the actual passage?

159. Explain the terms passive and active defense as applied to rivers.

160. The locality fixed, what tactical considerations should determine the point of crossing a river, supposing the river itself, as regards depth and width, to be about the same for some distance?

161. What are the circumstances which materially assist a defender to concentrate his forces with sufficient rapidity to dispute the passage of a river?

162. Why is a rallying point on the opposite bank when crossing a river of such extreme importance, and why should principal and secondary crossings be combined?

163. What rôle is played by the artillery of an army in—

(a) Crossing a river in the presence of an enemy?

(b) Opposing an attempt to cross?

164. How should a force of all arms pass a defile in the presence of an enemy?

I. Villages and woods.

165. Describe the general arrangements you would make for the defense of a wood with regard to—

(a) The disposition of the men under your command (artillery and infantry).

(b) The construction of obstacles.

166. What difference would you make in putting a village into a state for defense—

(a) To hold it to the last?

(b) To retard an enemy?

What is of primary importance in both instances?

167. What are, in your opinion, four of the principal considerations which influence the defense of a village?

168. State generally how the attack of a village should be conducted. Say why it should be avoided if possible.

169. What are the points to be noted before occupying a wood? Where is the heart of the defense situated?

170. How long is a wood of advantage to the defenders? What are the weakest points in defending it, and how should they be protected?

171. What is the disadvantage of wood-fighting common to both sides?

J. Convoys.

172. What general rule regulates the strength of a convoy, and what is the rule as to the order of march of the wagons?

173. How should the escort be distributed, supposing it to be composed of infantry and cavalry? What troops should furnish the advanced guard, and why is reconnoitering so essential?

174. What is the rule as to halts—(a) temporary halts; (b) halting for the night; (c) when the convoy is of gunpowder?

175. What are the most vulnerable parts of a convoy, and what dispositions should be made to protect them?

176. Describe how you would get through a defile with a convoy, supposing the enemy to be in the vicinity?

177. How is a convoy of boats conducted?

178. What positions would you select for the attack of a convoy, and what is the best combination of troops for the purpose in an average open country?

K. Night attacks.

179. State what the advantages and disadvantages of a night attack are.

180. When is a night attack admissible?

181. State some of the principal precautions to be observed in undertaking operations at night.

182. Give the formation of a column consisting of a brigade of infantry, one regiment of cavalry, one battery of artillery, and a company of engineers during the march to a night attack.

183. What is the rôle played by the assailant's artillery and cavalry during night operations?

184. How should the defender's outposts act on the approach of attacking columns at night?

185. Supposing a night attack to be successful, what troops should pursue until daybreak?

VII.—STRATEGY AND TACTICS.

186. What must be the character of the roads for the operations of large armies, and why do armies generally operate by several roads defensively and on the offensive, with examples?

187. What power does the offensive give, and what is the initiative?

188. What are some of the considerations for a selection of a theater of operations?

189. What is the general object of strategy and what are the kinds of advantage to be obtained by strategy?

190. What are the particular objects of strategical movements?

191. What are the alternatives of an army cut from its base?

192. What are the comparative advantages of partial and complete interception, with examples?

193. What are the deductions from the different ways in which a containing force may be employed, with examples?

194. What are the general deductions from operations interposing an army between the parts of an extended front?

195. What are the campaigns of 1861 and 1862 in Virginia given to illustrate?

196. Compare the advantages of turning the flank or breaking the front of an army.

197. What are the general conclusions from the discussion of mountains and rivers, as traversing obstacles?

198. What are the deductions from the battle of Prague?

199. What is the aim in modern battles, and what formation is recommended for attack?

200. What was the Prussian order for attack in 1870?

201. What should a line of battle be?

202. What are the comments on the battle of Woerth?

203. What three kinds of tactical advantages are set forth?

204. What are orders of battle defined to be, and when is the order well chosen?

205. What form did the line of the allies assume at Waterloo, and what is said of it?

206. What would influence in the selection of points of attack?

207. What renders a defeat decisive?

208. In attacking a position, what is to be done with advance posts, and what is said of strong points in the line, with examples?

209. What should be the point of attack when a flank of the enemy rests on an impassable obstacle?

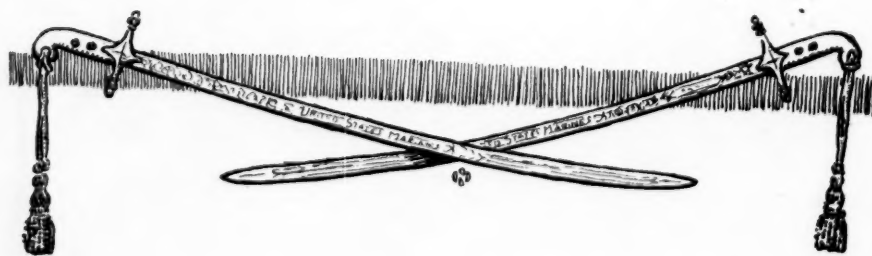
210. How should the ground be occupied on the defensive when a flank is covered by an obstacle?

211. In taking up a defensive line, or attack while maneuvering, what conditions should the general seek to obtain?

212. What should be the conduct of an attack?

213. What was the Prussian final formation for attack in 1870, and why did this increase the effect of the aggregate amount of fire?

214. Considering the changes in contemporary tactics, what should be the disposition of first, second, and third lines, and general reserves on the defensive?



Foreign Affairs

An Outline of International Political Conditions Today, Our Relations to Them, and the Bearing on the Outlook for America's National Defense

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Prepared for the *Marine Corps Gazette*



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For the past thirteen years Dr. Healy has devoted his entire time to the promotion of better international understanding and the cause of world peace, in which field he has gained national and international recognition. He has travelled extensively in many foreign countries. By reason of intimate and continued contacts with outstanding American and foreign authorities, officials and diplomats, the writer is exceptionally well qualified to discuss the complicated international questions involved in this article. Few American professors have had better opportunities to form accurate judgment on the rather delicate matters treated herein.

A recognized authority both in the United States and in Europe upon questions of international law, he is a member of societies of international law and political science and an author of numerous books and articles bearing upon these subjects.

■ On May 16, President Roosevelt electrified the world by addressing a direct appeal to the heads of fifty-four nations, emphasizing the very grave political and economic conditions of the world today and urging the vital necessity of immediate international cooperation to remove the dangers and to promote world peace and prosperity. With characteristic frankness and bluntness, our President did not leave anyone in doubt as to the gravity of the situation when he said that:

"The happiness, the prosperity and the very lives of the men, women and children who inhabit the whole world are bound up in the decisions which their governments will make in the near future."

The peoples of the world had scarcely a chance to read and digest Mr. Roosevelt's appeal when the next day Chancellor Hitler of Germany again startled the world by convoking an extraordinary session of the Reichstag and delivering a stirring message, not only to the German people, but to the world at large.

Starting with the Covenant of the League of Nations fourteen years ago, there has been a succession of almost innumerable international conferences and treaty agreements designed to insure international peace and promote international prosperity. Up until very recently, a large group of optimists in this country and abroad, fired more by a worthy zeal than by a practical realization of the cold facts, led themselves to believe that a new era of international morality and peace was rapidly on its way and that many of the signed agreements were really effective. A much smaller minority of qualified observers, while sharing the high ideals of the other group, could not, in view of the concrete facts, convince themselves that there had been any radical improvement. Just before the messages of Roosevelt and Hitler were delivered there was increasing evidence that the optimists had come to the realization that the views of the minority more nearly squared with the actualities. On May 15 there seemed to be a general opinion that international political conditions were worse even than in 1913, just before the outbreak of the World War. In the entire world there is probably no one who has been a more staunch advocate of these post-war peace measures and a pronounced optimist on the subject than Dr. Nicholas Murray Butler, President of Columbia University and President of the Carnegie Endowment for International Peace. And yet in a report of March 1 of this year we find Dr. Butler saying that: "It is astonishing in how many ways human nature reveals itself as unchanged and unchanging across the centuries and under circumstances which differ as widely as can be imagined. . . . His (Thucydides) analysis of the effects and the accompaniments of the Peloponnesian War some twenty-three centuries ago is literally descriptive of what is going on in the world today." Later he states that "apparently the

spirit and temper of mind which led to the Conference on the Limitation of Armaments in 1921, to the signing of the Treaties of Locarno in 1925, and to the signing of the Pact of Paris by fifteen governments in 1928 and now adhered to by sixty nations in all, *have been almost as completely forgotten as though they did not exist.*" In addressing the Conference of Militant Pacifism in Washington on April 21, 1933, Dr. Sidney E. Goldstein, Chairman of the War Resisters' League, stated that "the menace of militarism and the threat of war are immeasurably greater" than they were a year before the World War began. Saying that the "instrumentalities of peace in which we have trusted during the last generation have all failed us," the speaker cited the League of Nations, the Nine-Power treaty, the Locarno agreements, the Briand-Kellogg Peace Pact and the 1932 Disarmament Conference.

Undoubtedly international affairs on May 15 were in a very critical state. It is equally obvious that these dangerous situations had a very vital bearing on the present and future policy of the United States. The entire question of our national defense depends not only on the present situation but on the future outlook as to what may happen in the international field.

It would thus seem obvious that it is of the highest importance that every leader of American thought and everyone interested directly or indirectly in our national defense problems have a general understanding of the composite international picture and how it may affect our country and its national defense. What will be the probable effect of the messages of Roosevelt and Hitler on these problems?

It is the purpose of this article to present a skeleton outline of some of the major phases of the problem as viewed by the writer and a number of other Americans and even foreign authorities. We do so in full realization of the fact that many of the matters treated are highly controversial and that there is much ground for an honest difference of opinion. We regret that limitation of space naturally prevents us from going into detail.

It would be fruitless to outline the general situation without first taking into consideration what effects, if any, the Roosevelt and Hitler messages may have. As this article goes to press only a few hours after the messages were delivered, there has been practically no time to learn the practical reaction of the world to them. Our analysis therefore is largely in the nature of a tentative prediction based largely on information which is far less complete than would be available a few months hence. In spite of these handicaps, a number of us are inclined to believe that matters will shape up as follows.

Both of these documents are of the highest importance; but their importance lies more in the distant future than in the immediate present. Their major immediate importance will be to emphasize in a more striking way than has been done up to date the perilous status of world affairs today. They will probably postpone for a while the final "show down" and thus give the world a much needed breathing space. We believe that, unfortunately, neither of these documents have contributed much substantially new towards the solution of the menacing problems of the world, but have largely re-emphasized problems already known and proposed solutions which, under somewhat different form, have been under intense discussion for a number of years past. As an expression of high minded ideals and objectives, we do not believe that any serious person would question their great value.

They are formidable practical obstacles not solved by this message, and which seem to limit hope to a maximum of "an acceptance in principle" by some of the major nations who are in the middle of the vortex and whose *practical* cooperation is absolutely essential if any substantial results are to be obtained. The wholehearted, theoretical and practical acceptance of a large group of smaller nations will be in vain without the *practical* collaboration of the large nations who are the key to the matter. "Acceptance in principle" without practical application is a snare and a delusion, which all too often in the immediate past has raised the hopes of mankind, only to have them crushed soon thereafter. "Acceptance in principle" by the major powers in the present instance would be merely a prudent move to avoid offending American public opinion without binding these nations to take the final practical action which is so sadly needed.

The world is now preparing for the London Economic Conference, to be held starting June 12, and many leading statesmen, including Mr. Roosevelt, have declared publicly that the world will face chaos unless that conference succeeds. Many of them insist that there is no chance for economic disarmament without military disarmament. They believe that the failure of the Geneva Disarmament Conference will inevitably mean the failure of London and they stand aghast when they look toward the horizon and see the chaos which might possibly follow such failures. In the minds of many, the impending disaster and the attempts to ward it off are the real reasons which motivated Mr. Roosevelt and Mr. Hitler to issue their messages in such a dramatic and sudden fashion.

While we realize the gravity of the situation and the great blow to civilization that would be struck by the failure of these two conferences, candor compels us to express the view that, in spite of all heroic efforts, neither Geneva nor London have much chance to produce substantial concrete results towards the solution of the existing international economic and political problems.

However, we believe that all leaders of thought should be on their guard against expecting in advance too much from Geneva or London or by over-rating such "paper" results as may issue from those conferences. Undoubtedly some agreements will be reached and signed, but the present situation does not seem to justify expectations that these agreements will be a radical improvement over the present situation. Furthermore, it is well to remember that even if the nations sign unanimously treaties at Geneva and London, this is only the first of many steps before such treaties can be made really effective. Many of the troubles of the world today flow from the fact that too many treaties have been signed but never ratified by sufficient nations and still more of them that have been ratified have never been put into practical effect. Furthermore, conflicts of interpretation of ratified treaties have more than once wrecked the ostensible purposes of these treaties.

The views expressed above (and which if true will dash to the ground the hopes of many right-minded persons) should not be stated by anyone in a casual way without supporting evidence. The supporting evidence is found from an examination of the existing world conditions which we shall now endeavor to give in brief outline form.

The world today is not only an armed camp (the

signers of the Kellogg-Briand Peace Pact having six million men in actual military service, with many times that number in their organized military forces), but actual conflicts are in progress in both the Far East and Latin America. The general European situation is such that in the minds of some level headed specialists a general international conflict might break out at any moment involving most of Europe and that unless some unforeseen change occurs another World War is not far off. There is apparently little practical faith in Europe as to the efficacy of peace pacts and covenants; the old balances of power are back again and most of the European nations are relying on armaments, plus alliances either public or secret.

Much confusion has resulted in recent years from the mistaken idea that armaments are the disease. Armaments are not the disease, but symptoms or results of a disease. Mr. Roosevelt in his message outlined very clearly the truth of the matter. He said:

"If we ask what are the reasons for armaments, which in spite of the lessons and tragedies of the World War, are today a greater burden on the peoples of the earth than ever before, it becomes clear that they are twofold.

"First, the desire, disclosed or hidden, on the part of governments to enlarge their territories at the expense of a sister nation. . . .

"Second, the fear of nations that they will be invaded. I believe that the overwhelming majority of peoples feel obliged to retain excessive armaments because they fear some act of aggression against them and not because they themselves seek to be aggressors.

"There is justification for this fear. . . ."

Europe is divided into two camps, one under the leadership of France and the other under Germany. The French group are insisting on the preservation of the status quo flowing from the World War Peace Treaties. The German group, in spite of the somewhat conciliatory address of Chancellor Hitler, is apparently aiming at a drastic revision of the territorial clauses of those treaties. Outside of possible minor rectifications of frontiers, the nations who at present possess the desired territory, have served notice on the world that they do not intend to give up an inch without a life and death struggle. The views of both groups seem to be in irreconcilable conflict, both are apparently adamant and it is difficult at this time to see any probable solution except through war, where the group having the major force will probably vindicate the rights that it is pleased to claim.

Indications are that in case of a "show down" the following status quo nations, having a practical community of interests, will be found fighting in the French group—France, Belgium, Poland, Czechoslovakia, Roumania and Yugoslavia. While the possible line-up of the German group is not entirely clear at this time, it will probably consist of Germany, Italy, Hungary, Austria, Bulgaria, Albania and even Turkey. While at the moment Italy apparently is not entirely in sympathy with the aims and methods of Hitler, her definite stand on the necessity of territorial revision and her traditional and continuing antagonism to France might find her cooperating with Germany when the time for armed conflict arrives.

Great Britain is somewhat of an enigma, veering a

part of the time to one group and the rest of the time to the other. In the last decade much of her sympathy and many of her actions have been in favor of the German group. Last summer it appeared that she was lining up rather definitely with the French group. The MacDonald Plan of a few weeks ago, following upon a hasty visit of Mr. MacDonald to Mr. Mussolini, seemed to swing her around again towards the German group. The very recent Nazi excesses in Germany and the bellicose attitude of Mr. Hitler's administration, which seemed to be heading Europe straight for a devastating war, appear to have alienated a large part of British public opinion and alarmed the British Government to such an extent that during the last several weeks, responsible British officials have made some very drastic and even menacing declarations against German policy. In view of these rapid changes of orientation, it is difficult to predict what action Great Britain will take if an armed conflict breaks out. However, it is well to remember that over a period of many years a considerable proportion of the British public have been strongly in favor of a substantial revision of the territorial arrangements of the World War Peace Treaties.

Russia and the threat of Bolshevism overhang the entire situation and have caused both groups to be fearful; Mr. Hitler's speech contained some very striking statements as to the menace of Communism. The European situation has had its repercussions in the Far East and has undoubtedly affected the attitude of the various European nations towards Japanese actions and also accounts for their changes in attitude as the European situation itself changed.

The immediate sore spots in Europe are: the strained relations between Italy and Yugoslavia, the Little Entente and Hungary, and the question of the Polish Corridor and Danzig creating dangerous friction between Germany and Poland. Recent happenings that have by no means allayed the steadily rising tide of fear are: the discovery in Austria of a large number of rifles apparently being sent by Italy to Hungary, the possibility of trouble in connection with the elections to be held in Danzig at the end of this month (May) when it is rumored that the Nazis may assume control of the Danzig government, the recent consolidation of Czechoslovakia, Yugoslavia and Roumania into an international entente representing fifty million people with the possible addition of Poland with its thirty million inhabitants, the failure to date of the Disarmament Conference, the pessimistic outlook for the coming London Conference, and Germany's threat to rearm.

The pointed statements of Mr. Roosevelt and the rather unexpectedly conciliatory address of Mr. Hitler have probably caused a temporary improvement in the situation. However, we do not see as a result of these two messages the probability of any really substantial reduction in armaments or effective non-aggression agreements, such as proposed by Mr. Roosevelt. At the moment, the French group have a considerable superiority in arms. Any large general reduction or plans for equalizing armaments could only operate to the disadvantage of the French group, as long as there is a probability that as soon as they are able the German group will attempt aggression against them for the purpose of regaining lost territory. It should not be forgotten that if both Germany and France totally disarmed, that German resources would be far superior

to those of France. France has a population of forty million compared to sixty-five million Germans; it is believed that the industrial organization of Germany is larger and better than that of France; Germany has the strategic advantage that being under a centralized dictator, her forces could be mobilized more quickly and more effectively than those of France, whose action would be slowed down by the necessity of parliamentary discussion and approval. It is well to remember that many competent observers are convinced that, in view of existing conditions in Europe today, the large and well armed French military establishment is for the moment probably the most effective and practical guarantee of the immediate peace of Europe.

European nations as a whole are watching anxiously the policies that the United States might follow in reference to consultation, sanctions and embargoes and its general attitude toward the sanctity of treaties and disarmament programs. It is believed that some leading European statesmen have misinterpreted parts of Mr. Roosevelt's message as to the extent that we may be ready to go to promote world peace. We are convinced that Mr. Hitler was not expressing the true meaning of Mr. Roosevelt's words when he referred to "The American President's magnanimous proposal to put up the powerful United States as a guarantor of peace."

While an unexpected incident might readily precipitate a general war in Europe, there is one important ray of hope. The system of Alliances is such that a conflict between two nations could not be isolated but would probably spread throughout Europe. The temper of the masses of Europe today is such that (as Mr. Hitler indicated in his speech) a general war will find only one victor—Communism. Since in such an event none of the present leaders would gain anything and most of them would doubtless be swept out of power by the irate masses, it is probable that no responsible European leader would dare precipitate willingly a general European conflict. However, it is well to remember that in 1914 the assassination of an Austrian Archduke by an unknown Serb in a little known town of Europe precipitated a conflagration which eventually involved not only most of Europe but the United States, and the Far East and even Latin America.

In the Far East, Japan has thrown down the gauntlet to both the League of Nations and the United States and has embarked on a huge military program fraught with grave danger not only to the peace of the world but particularly that of the United States. The Japanese, who seem to feel that their actions are both necessary and justified, apparently believe that a major obstacle in their way is the United States. One thing seems to stand out clearly in this situation, namely, that it seems difficult, if not impossible, to stop Japan unless one or more nations are ready to wage a major war against her. It does not seem probable that any major European nation is ready at this time to engage in any such venture. The fact that in the minds of many Japan's actions have been a direct challenge to the League, its Covenant, the Kellogg-Briand Peace Pact, the Four Power Pact and the Nine Power Pact, has by no means promoted a feeling of security in the world or a belief in the peace agreements and disarmament plans.

While many of the leading statesmen of the world

are talking of peace and disarmament, their governments, with the exception of the United States are proceeding to maintain or increase their armaments in preparation for conflicts which apparently they believe are coming or as a precaution to prevent such conflicts. Instead of a well ordered world, controlled by definite agreements, we find that there is great confusion even as to the most basic terms. If space permitted, current examples could be given to show that there is no general agreement on such fundamental things as what is war, vital interests, national honor, national policy, self-defense, what is a soldier, what is an instrument of aggression, who is an aggressor, what are the rights of neutrals, what is meant by international justice and what are the principles of international law by which the nations should be guided in their relations. In view of the confusion as to the most fundamental terms, how can treaties embodying these terms have much definite and practical effect?

The existing situations in Europe, Russia, the Far East and even in Latin America are such as to furnish more than a remote possibility of the United States being involved in armed conflict within the next few years.

It would seem that since the World War most of the nations of the world have been becoming more and more nationalistic, in spite of innumerable international conferences and an unceasing flow of words purporting to indicate international cooperation on a huge scale. It seems to us that the United States has not merely contributed to the endless flow of words but has actually directed much of its policy towards the practical achievement of the sought-for international cooperation; we believe that to be true in spite of the continued assertions of distinguished Americans who cite our failure to join the League of Nations, the World Court and other similar international organizations as a proof that we have been an obstacle in the way of effective international cooperation. Whatever the view of these Americans, there is evidence tending to show that Europe, Latin America and the Far East believe that we have promoted so assiduously the plan of international cooperation that we have gone to the extreme of unduly meddling in their business with dangerous results.

President Roosevelt in the few words in his Inaugural address that he devoted to our international policy said:

"I would dedicate this nation to the policy of the good neighbor—the neighbor who resolutely respects himself and because he does so, respects the rights of others—the neighbor who respects his obligations and respects the sanctity of his agreements in and with a world of neighbors."

These few words seem to contain much wisdom. The antithesis of a good neighbor is one who meddles unduly. Family quarrels of those who live near us may be a source of great dismay to us but do not necessarily justify our interference. On the other hand, it may concern us when our neighbor maintains in the adjoining yard a heap of inflammable material and endangers not only his own home but ours by unnecessarily dropping lighted matches around this inflammable material.

There has been more than one indication in plat-

forms and in official actions and words, both in the recent and present administrations, which seem to lead to a presumed duty on our part to at least consult with other nations in case of international difficulties and some of these statements have gone so far as to intimate that the traditional American claims to neutral rights may no longer be valid. Many of the things that are frequently on the lips of our citizens as well as those of other countries—such as “consultation,” “embargoes,” “boycotts,” “sanctions” and the like—might, if applied injudiciously, easily become the causes of armed conflict rather than guarantees of peace and justice.

Prognostications as to the future are difficult and dangerous. One group of competent American specialists sum up the situation as follows. Isolation is impossible for us whether we wished it or not. A one hundred per cent internationalism runs so counter to American traditions and prejudices that for many years to come it will be impossible in this country. This group believes that motivated by very high ideals and with the very best of intentions the people of the United States have for the last decade been busily engaged in carrying out what appeared to be a divine mandate to save the world; the present situation shows that unfortunately we have not saved the world nor made much progress in this respect and the principal thing that we have received for our pains has been almost universal dislike and criticism. They believe that we have not only not achieved anything substantial in our attempts to promote world peace and co-operation but that in our efforts we have needlessly sacrificed valuable interests of our country. While they realize that our enlightened self-interest as well as the welfare of the world requires that we participate in world affairs, they insist that this participation should be based on the fundamental rule of enlightened self-interest rather than on the international pollyanna spirit which has recently been so conspicuous.

As a cardinal guide in our international policy they would have graven indelibly on the mind of every true American a statement of George Washington fraught with so much wisdom and yet all too often forgotten. In a message to Congress involving directly France, the Founder of our Republic said: “It is a maxim founded on the universal experience of mankind, *that no nation is to be trusted further than it is bound by its own interest*; and no prudent statesman or politician will venture to depart from it.” An idealist who was still a realist had spoken even though it was against a friend and ally!

They insist on the necessity of drawing a prudent distinction between the economic and political phases of international cooperation. They believe that the role that we will probably be called upon to play in international affairs necessitates a reasonable building up above the present levels of our national defense establishment, particularly the navy, with the army to be strengthened not by increasing the size of the Regular Army as such, but through adequately maintained auxiliaries such as the Reserve, the National Guard,

the R. O. T. C., the Citizens Military Training Camp and the like.

They believe that the Marine Corps as an integral part of the Naval Establishment, with a mission in our national defense which cannot be met by any other branch of the military or naval service, should be maintained at a strength which will make it possible for it to carry out its assigned mission adequately.

While this group holds the views stated above as to what they think should be done, they are fearful that at least for the next year the opposite policy will be followed in practice. The present situation is so confused with numerous statements and counter-statements, rumors and a general vagueness, that it is indeed difficult for anyone to make any accurate prophecy as to what might happen during the next year. As far as anything definite can be obtained from the present situation, the chances are that we shall become more and more involved in international political affairs on a basis which many Americans consider unwise, because the action will be predicated more on ideals than on realities and among the great nations of the world we will be almost alone in using such a basis. They are afraid that in spite of the critical international situation, the already meager defense establishment of the United States will be cut down drastically; the personnel of the Army, Navy and Marine Corps will be reduced, a third of our naval vessels laid up temporarily, Naval Stations abolished, and the Reserve, the National Guard, the R. O. T. C., and the Citizens Military Training Camps crippled in essential ways. They believe that these things, which they consider not only unwise but dangerous at this time, will take place unless there is an immediate awakening of the American people to the basic facts. They do not object to necessary and wise changes which may promote efficiency and effect much needed economies. They do object strenuously to changes which they consider neither necessary nor wise and which will do much to cripple in general our national defense at a time when the situation throughout the world is admittedly worse than it has ever been since the World War. The only counter-balancing ray of hope is the probability of some new naval construction in the immediate future both for the purpose of aiding employment and simultaneously to put our navy nearer the goal of parity which is guaranteed to us by treaty agreement. This group also feels hopeful in the sense that the reduction in our national defense establishments will be very temporary, because the cold facts of the International situation will inevitably become clear to the American people in a comparatively short space of time and they will then appreciate in a practical way the futility of unwarranted optimism and the necessity of strengthening our national defense establishment. Hence, their views as to the present and the immediate future are very pessimistic; however, they are not discouraged as to what the situation will be several years hence. They are hopeful that what might be done will not cause irreparable damage.

Naval Support to the Landing of a Marine Expeditionary Force

BY COLONEL E. B. MILLER, U.S.M.C.

■ *This is the third of a series of articles on the subject of a Naval Expedition involving the landing of a Marine Expeditionary Force. The first article, entitled "The Marine Corps; Its Mission, Organization, Power and Limitations," appeared in THE MARINE CORPS GAZETTE for November, 1932. The second article, entitled "A Naval Expedition Involving the Landing of a Marine Expeditionary Force," appeared in the GAZETTE for February, 1933. The present article completes this series.*

NAVAL GUN FIRE SUPPORT

General Hamilton, in his dispatches, wrote:

"Normally it may be correct to say that in modern warfare infantry cannot be expected to advance without artillery preparation. But in landing on a hostile shore the order has to be inverted. The infantry must advance and seize a suitable position to cover the landing and to provide artillery positions for the main thrust. The very existence of the force, its water supply, its facilities for munitions and supplies, its power to reinforce, must absolutely depend on the infantry being able instantly to make good sufficient ground without the aid of artillery other than can be supplied for the purpose by floating batteries. This is not a condition that should take the commander of a covering force by surprise. It is one already foreseen."

Corbett, in commenting on this remark, says:

"Whether or not the latest experience goes to show that under modern conditions this principle will no longer hold good, may be regarded as an open question until it is proved that the control and nature of floating fire cannot be developed so as to meet new conditions."

Just what value Hamilton gives to naval gun fire support is somewhat obscured in his statement, but Corbett leaves no doubt as to his opinion. With him it is an open question until it is proved that naval gun fire cannot be developed to meet the modern conditions in warfare.

The general conclusion reached by most writers on the subject of naval gun fire in support of landing is that it is not suited to properly support such an operation.

Some of the reasons given for this conclusion are:

1. Naval guns were constructed to fire at ships.
2. They are not suited to perform tasks required of land artillery. To make them do both would weaken their naval fire effect.
3. Short life of naval guns.
4. Flat trajectory with small angle of fall.
5. Ammunition not suited for land targets.
6. Limited ammunition allowance.
7. Ship has little room for additional special ammunition.
8. Relative position of firing ship and land target must be definitely known in order to put MPI on target.
9. Night firing impracticable due to absence of plane spot and indefinite relation between firing ship and land target.
10. Difficulty in extending ship fire control system to the beach and inland.
11. Submarine risk to capital ships.
12. Risk of combatant ships to concentrated fire of enemy heavy mobile guns with air spot.
13. Risking heavy ships may weaken our battle line.
14. Risks assigned to support a landing must be of type and number which can be spared from operations with the fleet for a considerable period.

And so they contend that the employment and control of naval gun fire against harbor defenses, against heavy mobile guns, in close support of a landing, against beaches, in concentration, interdiction and bombardment of land areas, is an emergency employment of naval vessels predicated solely upon the absence of other more suitable equipment, and that the type, ammunition, fuses, amount supplies are basically unsuited for providing the kind and volume of fire desired for support of an assault against a defensive position.

Before we can discuss this "open question" let us see what may be expected from the ships in the way of gun fire.

Counter-battery fire against guns firing on transports and troops during debarkation on troops and supplies en route to the beach; on troops at the landing beach; on troops advancing inland; on light vessels in close support.

Preliminary bombardment of landing beach, especially the shore-line and its immediate hinterland, in order to break up enemy beach defense. This preliminary bombardment may or may not have definite targets. Prior information and reconnaissance may have developed definite areas, but frequently the fire is at a general area with the hope of developing the enemy, make him show his hand and open with his artillery thereby disclosing their positions. The air force may locate definite targets. In any case, the beach and beach area must be an objective and must receive a heavy and searching fire. Then, just when the attacker nears the beach and needs the fire a few hundred yards ahead to keep the defenders under cover and prevent them manning their defenses and resisting the attack, naval gun fire, due to its limitations, must lift 1,500 or 2,000 yards and leave the enemy beach defense and close support free from bombardment.

Concentrations must be placed inland from the beach until the assault echelons are established on the beach. These concentrations should be placed as close to the assaulting troops as safe firing will permit. Their targets will be strong points holding up our advance; enemy support and reserve positions; searchlights, if operating during our approach; on known locations containing ammunition and supply dumps, hangars and important defense areas; on enemy flanks. In connection with this flank firing, when ships are assigned to protect a flank, they too must know what to shoot at and have a fire control party ashore, ready and able to give them the needed information.

Interdiction fire on important points of enemy communications and routes of approach for their supports, reserves and supply.

Searching fire to wipe out opposition in the form of machine gun nests and isolated guns and batteries which cannot be located by plane or land observation posts and yet are holding up the advance.

These fire missions indicate the necessity for carefully prepared plans in assigning and locating ships groups for close support, long range fire, general support and special emergency fires; for fire control and distribution; for ammunition supply, for gunnery communications; and for air support.

Fire control is the function of the naval officer.

A few figures here might be of interest. At Gettysburg the Federal forces, 100,000, fired in three days 32,781 rounds of artillery. At St. Miheil the American 1st Army, 550,000, fired in 4 hours preliminary bombardment, 1,093,217 rounds. The total ammunition carried by 428 U. S. Naval combatant vessels, including gunboats and eagle boats, is 910,805 rounds. A force composed of 15 battleships, 16 heavy cruisers, 14 light cruisers, 13 destroyers and 9 submarines carries 245,220 rounds. At 27,000 yards range this force could fire 408 round per minute for 1 hour and 13 minutes. At 13,000 yards it could fire 2,274 rounds per minute and at that rate would exhaust its ammunition in 1 hour and 47 minutes. Apply any factor you please to reduce that rate of fire and you will still have a tremendous bombardment, when you consider that it is concentrated on a relatively small area as compared to the battle front of the First Army, approximately 20 miles.

Another point. All shore batteries are not all on the beach but are staggered in depth and the objective of all rear guns is not ships but small boats en route to the beach, the water just in front of the beach and troops attempting to advance after landing. Many 75mm guns, with their effective range of 8,000 to 15,000 depending upon old or new gun, would be a considerable distance back from the beach, so that a ship 20,000 yards from the beach might have to shoot 25,000 yards or more to reach these batteries.

Fire distribution is the function first, of the prearranged fire schedule, and later, of the troop commander. The commander of the troops being supported by a group of firing ships indicates to the naval gunnery liaison officer on duty with him, the area and location to be fired on, the time to commence and the time to lift or cease firing. The naval gunnery liaison officer communicates this request to the firing ship or group. This officer must advance with the troops from the beach and be connected with his forward observer and the beach gunnery communication center by telephone.

These plans should include:

1. Map system providing for designation of targets and control of fire from a common map. A naval chart and a topographical map of a land area must be coordinated with a common scale and grids and then joined together, or else one common map must be prepared prior to the departure of the expedition. Many naval officers contend that the land operation map must be gridded in latitude and longitude and request for fire to designate the target location to the nearest ten seconds.
2. Responsibility for and methods to be employed in initiation, control, distribution, lifting, shifting or ceasing fire.
3. Designation of objectives, time schedule and volume of fire required.
4. Spotting methods, including means for identification of fire, gunnery reconnaissance by planes and shore observation posts.
5. Redistribution of fire in the event of loss or absence of any firing ship.
6. Employment of smoke screens to cover firing ships, landing boats, beach, or rear areas.
7. The use of star shells, flares and searchlights to illuminate targets or designated areas.
8. Communication plan for control of gun fire—between OTC, firing group commanders, firing ship, ship and planes, and all of the former with certain designated headquarters ashore. *A most important item.*

9. Movement of supporting ships and boat traffic in the support area.
10. Gun fire to cover a forced withdrawal of troops ashore.
11. Supply, location, allocation, type, amount and distribution to firing ships of any excess or special ammunition.
12. A definite statement of the power and limitation of each firing ship from a gun fire point of view in order that the tactical plan may be based on a definite naval gun fire.
13. The air plan, naval and landing force aircraft. Its early reconnaissance, if any, and its combat action in direct support and defense of the fleet, and in direct support of the landing troops and their subsequent operations.

There you have the naval problem.

Ships fire support *must* be sufficient and *must* remain and continue in support until the troops are established ashore. Trenches and machine gun are hard to hit with flat trajectoried guns and yet trenches and machine guns are what stops the attacking troops advance.

We know there is a great difference between naval and land artillery fire. Fire of the former may cause a temporary cessation of fire from shore defenses but it does not necessarily destroy enemy material and put their guns permanently out of action. Naval gun fire does however accomplish much more than we have given it credit for. We hope this fire will destroy much of the enemy beach defense, silence his guns and wreck his morale but this information cannot be confirmed until the troops reach the beach.

What are we going to do about it?

Agree with those who contend that our ships and equipment are not suited to this type of operation, sit tight and let the next war find us no better prepared to seize and hold a defended fleet base than we are today?

Or shall we recognize the fact that naval gun fire *has been, is and will be* effective against land targets and in support of a landing, and energetically continue our efforts to improve the old and develop new methods for the delivery, control and distribution of an effective fire that *will* furnish the fire support essential to such operations?

In 1891, Admiral Colomb of the British Navy, wrote:

"If sufficient war ships are present, and their fire available, it should easily prevent loss in embarking (in small boats and advancing to the beach)."

If that be true, why is it that ships of 1931 cannot do what was possible for ships of 1891? In spite of the fact that Britain's wars have all been overseas expeditions, and that she has had more experience in this class of operations than any other power, Admiral Colomb's doctrine certainly did not work out at Gallipoli.

But was that the fault of the British Navy?

Yes—and it may be our fault if we do not take advantage of and profit by the bitter experience of the British in that campaign.

The British and French navies furnished enough support to permit Hamilton's army to march to Constantinople and back, provided that Army and Navy had arrived off the Dardanelles with a plan of action and prepared to carry out that plan.

Hamilton constantly decried his lack of artillery and artillery ammunition. If a proper reconnaissance had been made; if proper preliminary combined planning had been done; if the fleet gun fire support had been properly tied in to the tactical plan; if the ships had been assigned targets and fire missions which their fire could reach; if the landing had been based on a proper conception of what and where ships could support by fire; if the British Navy had known one-quarter as much about naval support in April as they did in No-

vember; it would seem that Hamilton had, in the naval gun fire then available, a much greater and more powerful artillery support than he could have possibly made available initially with mobile land artillery.

Mind you, I do not contend that naval gun fire can replace or is equal in efficiency to mobile artillery in land operations. But I do contend that it is a good substitute and can produce effective fire support if properly controlled.

The British Navy started the war in Gallipoli and failed for want of an army.

The Army arrived and failed, not because of the failure on the part of the Navy to support their land attacks, but because the great potential power of these naval guns was not properly utilized in support of and in combination with the Army attacks.

The Army and the Fleet were to act side by side, the former helping the latter through the Straits. The Navy got behind (not alongside) the Army and tried to push the Army up to the vital land areas controlling the Straits, and they did not know how to push.

Then, when the Army announced the game was up and decided to evacuate the Peninsula, the Navy, too late, begged and pleaded for one more crack at it with a combined attack—an advance through the Straits and naval support to Army attacks.

Many of the purely naval plans were excellent in their conception and execution. And we may make the same comment with reference to many of the army plans. But combined planning, in which the powers and limitations of each arm were carefully considered and one balanced against the other until the best solution permitting the best joint effectiveness of both arms were determined—such planning, in the early part of the campaign, was prominent by its absence.

The Navy did not know what it could do.

The Army did not know what the Navy could do.

And when they found out—it was too late, at least too late to overcome the opposition at home.

Are we better informed today than was the British Navy in April, 1915? Do we know what we can do in a similar emergency?

The British Navy claimed that the Army's estimate of the value of naval support was based on results obtained in the early days of the campaign when the ships had practically no ammunition and all the ships were inexperienced in this kind of operations. You see, the Navy makes no apologies for their inexperience. This was not the case later. They had had a year's actual war experience. They had improved their methods of spotting, observation, communication, direction and control of fire. They knew where to look for targets and were better able to recognize them when seen. They no longer boomed away at the high cliffs and expected to kill Turks under cover behind them, but maneuvered their ships into positions where their flat trajectories would sweep the gullies and ravines and enfilade the enemy trenches and areas behind the cliffs. They rendered this support even if the ship had to stick her nose on the beach to do it. They had become much more efficient at night firing and it was not uncommon to flash a searchlight, pick up enemy troops moving to attack or going into position, open fire and inflict sufficient damage to destroy the force or break up the attack. Their counter-battery work had silenced battery after battery. Their supporting fire had broken up attack after attack and made possible many forward movements of their own lines.

Their concentrations had destroyed reserves, dumps, depots, ships, barracks, billets, etc. Their interdiction fire had destroyed bridges and made roads impassible.

Lack of time prevents my telling you of a few of the things the ships' gun fire accomplished. At Chocolate Hill, at Anzac, in enfilading ravines, silencing batteries, slaughtering reserves, supporting advances, night fire; at "X" beach, which is referred to as a model of combined operation; at "S" beach, where the landing would have failed but for ships' fire; at "W" and "V" beaches, where but for ships' fire the Allies might have been forced to evacuate; how throughout the whole southern end of the peninsula, the ship fire finally prevented the Turk making anything but a night attack; and at Kum Kale, where both landing and re-embarkation were made possible only by ship gun fire.

Intelligence reports state, "The demoralization of the Turks was greatly deepened . . . by the growing accuracy of the ship's fire on their billets, reserves and magazines." (Corbett III.)

"Turkish prisoners at Anzac 26 April, described fire from the sea as appalling—and made it almost impossible to get the Turks out of shelter of the broken ground and prevented anything like organized attacks from developing." (Corbett II, 349.)

"Turks say, regarding landing at 'S,' that owing to the severity of the naval bombardment, two field batteries sent down to resist the landing were unable to fire and a howitzer battery could only get a shot in occasionally." (Corbett II, 337.)

General Davies, commanding Holles, in October planned for tactical cooperation in an attack, with Captain Dent, who was an accomplished gunnery officer and commanded his supporting squadron. Lt. General Sir F. J. Davies, in his report, says—

"All who saw it agree as to the accuracy and volume of the monitor's fire, but the chief point is that it has been established that co-operation in an attack has now become a practical reality and that a system has been established which with further development will prove a powerful factor both in attack and defense." (Note—and due to weather conditions this support was rendered without air spot.)

Corbett, in referring to this attack, says—

"The operation was a complete success . . . so completely did the fire of Captain Dent's Squadron demoralize the Turkish gunners, that we were able to seize and consolidate the captured section with trifling loss."

Does that indicate to you that ships cannot support land troops by fire?

On the contrary, we might be led to believe that the troops at Gallipoli advanced as far as they did *because* of the ships' fire support, and their failure to advance further was *because* they were reaching the extreme limit of that ship fire support.

Corbett says—

"To them (the Turks) the fire of the ships was so systematic as to preclude movements either of guns or troops except at night, and so far from its tactical value being negligible, there is no longer any doubt that it was the determining factor which saved our men from heavy counter-attacks in the early stages." and he continues—

"The destruction which the ships' guns had wrought in the comparatively open country had put an end to all talk of driving us into the sea, and Essad Pasha had ordered the whole southern force to fall back on the lines that had been prepared in front of Krithia, in order, so we are told, to save it from being annihilated by the fire of the fleet."

The British Navy had been at this for a solid year. They were good and they knew it. They had not given up by saying that their ships and ammunition were not suited to the work and therefore could not properly support the Army. They kept on, improving this system and developing that system until they had convinced themselves of their own ability to produce what the army needed.

May I at this point ask the question—Are we taking steps to make our supporting fire equal in efficiency to that of the British ships in November, 1915?

And yet, how can we reconcile these facts with the statements of Hamilton, Caldwell, Corbett, deRobeck, Wemyss, von Sanders, Turkish General Staff, German officers with the Turkish Army, and others ad infinitum, who would convey the impression that naval gun fire, "due to its flat trajectory, was of little assistance to the infantry"?

I wonder how they themselves can reconcile their own statements, when, after reading their books and their reports, you find recorded incident after incident, attack after attack, defense after defense, in which they attribute all or a part of their success to naval gun fire.

Hans Kannengiesser, a German staff officer and division commander with the Turkish Army, in his book "The Campaign in Gallipoli," in speaking of the attacks on 25th and 26th April, says—

"The moral effect of these (the naval flat trajectory gun) on the defender is great, but the actual effect is not fully felt by the entrenched troops, who as a target are lying below the trajectory of the guns. This is the explanation of the almost laughably small losses on the Turkish side, in spite of the enormous preponderance of the Entente in ships' guns which outranges the land artillery, besides being heavier in calibre."

His observations made six days later, on 2 May, may still be *laughable*, but the laugh seems to be on the other side, for he says—

"As soon as the light was sufficient to allow the ships to shoot at the Turkish line an attempt to stay forward was equivalent to suicide. They therefore had to withdraw and carefully dig in where they found themselves at dawn. Any attempt at movement, any sign of life during the day was impossible, because whoever showed himself was immediately shelled from the ships . . . everything here living which showed itself by day must be killed. The food supply, munitions, stretcher-bearers, reinforcements, and last but not least the attack, in short any movement could only be possible under the protecting mantle of night."

And as a result of these observations of this *laughable* fire he reported to von Sanders and "He (von Sanders) completely agreed with me that it was useless to attack further and that we must prepare a defense."

Many of these writers were actually present and wrote of what they saw and the impressions made at the time—and then, later—in the quiet of their literary studies, held a post mortem—and concluded that in spite of the terrible ships' gun fire, the Allies lost, therefore the naval gun fire could not have been so very effective.

Even the conclusions of the Final Report of the Dardanelles Commission with regard to naval support must be taken with a grain of salt when we consider the lack of data presented from the naval viewpoint, as of the 165 witnesses called only seven were naval officers (1 Vice Admiral, 1 Rear Admiral, 1 Commodore, 3 Captains, 1 Doctor).

And these cases cover every item of essential gun fire support except two. The first exception is the keeping the enemy in his trenches at the time the infantry is ready to assault, and the second is the destruction of wire entanglements. All other fire missions, in preparation and support, the ships furnished efficiently, not once but time and again during the period of the campaign.

It seems to me that in our study and observation of this question of ship gun fire we fail to separate and draw a distinction between the effect of (1) ship gun

fire against forts and fortified areas, and (2) ship gun fire in support of landing troops and their subsequent operations. History records few successful operations of the former type but it is replete with major and minor successes in the latter class.

Many students of the Gallipoli campaign seemed to have based their opinion on the impotency of the fleet's fire, by actions of March 18th and prior thereto, and have given little or no attention to what the navy really did on April 25th and subsequently. I am not so sure that the attack on March 18th would not be classed as a failure had it been followed by another attack on the 19th. Then what would we have had to say regarding ship gun fire?

We are too prone to make the flat statement that ships cannot fight forts. I would qualify that statement by interposing the word "some" before the words "ships" and "forts." We must also answer the question—is the loss of one or more ships worth the occupation of the forts? That is beyond the scope of this paper, but it brings up the point that, if we will dig out the why success, the why failure, in past operations of ships against land targets, and then engage in some real, honest-to-God, experimental exercises, we may be able to find correctives that will reduce our failures to a few and increase our successes to many.

Yet with all the potential strength of naval gun fire support there is one most important mission that with present equipment it cannot accomplish—and that is maintain a bombardment on an area until friendly troops are ready to attack that area, and then lift the fire a short distance ahead to keep the enemy down while the attacker occupies it. This is where land troops suffer tremendous losses. Bombard a beach as you will; if that bombardment lifts, to prevent hitting our own attacking troops, and drops its shells 1,500 to 2,000 yards in rear of the beach, what have we to keep the enemy from manning his defenses and pouring forth his poison from every available infantry weapon. Only the air bomb—and that is dependent upon too many factors to allow us to base our landing plan on its results.

When the British attacked Helles, it was at first thought by those on board ship and in the boats that the enemy had been massacred by the preliminary bombardment, as there was no fire on the boats as they approached the beach. The Turk would have been slaughtered had he remained subject to that bombardment, but he didn't; he took cover, and then when the fire lifted or ceased, he manned his positions and opened fire.

The Turkish comment is that the bombardment of Helles was terrible but too short, and if continued for a longer time, it would have had its repercussion on the Turkish morale, inflicted greater damage to their positions, and the allies would have landed at greatly less cost.

Naval vessels were constructed solely for the purpose of fighting enemy naval vessels and their guns were built and installed for that purpose. When the air force became a factor of importance, ships included in their armament guns which could fire at planes, and they are now a most important part of that armament.

It is now past time when we should realize that naval guns must be able to fire at land targets and furnish that one important type of fire needed to efficiently support troops in their landing operations, as well as firing at ships and airplanes.

Why should the most powerful military unit in existence, a \$50,000,000 modern battleship, capable of throwing tons and tons of explosives at an enemy target ten to seventeen miles distant, with an accuracy that even the naval gunnery expert witnesses with pride, be limited in its offensive power by a flat trajectory and type of ammunition?

A high angle of fall and a thin walled, high explosive or shrapnel shell, with a sensitive or time fuse, would force the defender to his dugout and make the landing beach a comparatively safe place as to what it will be without some radical change in our naval gun fire support.

We must remember that it is not the *ship* behind the advancing troops that supports them but the *shells* in front of the troops. It is not the number of ships but the number of guns and accuracy and volume of fire. The relative position of firing ships is not determined by the position of the troop column which they are to support by fire, but rather by the nature of the terrain over which the troops must advance, in order that the shells from these supporting ships may furnish the support needed.

Let us now see how these ships are going to fire from the position where we left them 6,000 yards from the beach.

Using the "guide buoys" to reach their firing position, we must hope that they will be able to keep an accurate plot of their position while firing, even though underway.

In order to cover a certain beach area, the usual procedure of concentrating salvos will not work, and in darkness, with inability to see the target area or distinguish land marks, it will be most difficult to place the fire where intended and needed. So, in order to insure a spread to cover the front assigned to a ship, it will be necessary for each firing ship to determine for itself the offset in train from the "director" bearing that must be given each gun.

To determine the number of guns necessary to cover and search an area of a certain frontage, someone had taken, for want of definite data regarding naval guns, the artillery formula of four 75mm guns to one hundred yards of barrage and interpolated naval guns into 75mm equivalents. They obtain 3"-1; 4"-1; 1:2; 5"-2; 6"-3; 8"-6; 10"-8; 12"-10; and find that a BB of the *Wyoming* class equals 172 75's; *Utah* class 152 75's; an OCA *Huron* class 92 75's; an OCL *Denver* class 11 75's; and a DD 4 75's.

Those are merely figures. If we accept them, then a BB, *Wyoming* class, can cover a 4,300 yard front. But why stop at figures. We can find out what a BB can do by taking a regiment of Marine Artillery 75's and a BB, and go off and fire at some barren island and actually make a comparison upon which we may base our naval gun fire.

In assigning a position to each firing ship, we must:

1. Place the ship where its fire will be effective in the preliminary and supporting fire.
2. Its fire must damage the enemy and *assist*, not interfere, with the troops' landing and subsequent advance.
3. From within the boundaries of its sector, it must be able to continue its fire support through successive stages of troop advance, shifting its effective fire to other areas and at increased ranges.
4. Each ship must be assigned at least three fire missions—

- (a) Direct support of designated troops.
- (b) On request, if fire can be spared, fire in support of troop sectors adjacent to your own troops.
- (c) Emergency support over any part of the front within range of its guns.

5. Ships must avoid natural and enemy hazards.

In addition to the above support, certain ships, if available, should be assigned to long range bombardment and interdiction fire.

Many of these targets and target areas are shown on the artillery over-lay or gunfire map, and targets are designated by number, letter or geographical name. Each firing unit has a copy of this map.

Our first important fire mission is to destroy wire entanglements in the water and on the beach and to place a heavy fire on the beach area. To destroy wire requires many guns, much ammunition and a considerable period of time. The only naval gun we have able to accomplish this is the 8" anti-SS howitzer of 2,600 yard range. You know how the Navy failed to destroy beach and water wire at Helles. If we can get this 8" howitzer to within range of the beach and carry out an intense bombardment with them, the effect should be tremendous, as they have a very high angle of fall and a very high explosive effect. Its value just before and just after the troops landed would be immense.

Plans may be prepared for the conversion of cargo vessels into supporting gunnery ships, armed with six 155mm howitzers on navy mounts and having special wells fore and aft where the guns, in groups of three, can be mounted all on a center line, each group with director control. This will make possible a high angle, searching fire at ranges of 12,000 or 16,390 yards, depending upon the type of gun.

But can these cargo vessels stand the punishment from mobile shore batteries? If they can produce their worth in fire value, then their loss, after producing a real fire effect, might well be worth their sacrifice. If not, then we must put these guns on the supporting ships and carry them in to a range where their fire will be effective.

Naval fire control methods require accurate bearing and ranges to navigation marks, tangents on shore lines, or auxiliary marks specially placed. Many gunnery experts contend that "this requirement, together with the necessity for observing the fire, practically precludes night firing in support of a landing." With a stable zenith instrument, accurate fire in range can be delivered through a smoke screen, provided air spot can observe the fall of the shell. If we put phosphorus or some substance capable of leaving a lighted mark in shells can we use stable zenith director and plane spot at night? A submarine, just at dark, could actually plant special buoys to be used later as auxiliary aiming points. The planes, by daylight reconnaissance, if any, or by special map study, should be familiar with the land area selected for attack. A flare or star shells would give the plane its location at night and the lighted substance in the shell would indicate their point of fall to the plane. While this fire and spotting might not be accurate for a single, specific target, yet results would be very effective when shelling the beach or a particular area.

The 5" naval AA gun has the most modern indirect fire control system, making it capable of serving a dual purpose. We should increase the number of this type

of gun on firing ships. The present allowance cannot be diverted permanently from their air defense mission.

Reduced charges produce a greater angle of fall but the mere reduction in the number of bags also reduces the accuracy. It has been determined that 8" powder in a 12" gun, with a chamber reducer, will produce a reduced charge having an accuracy equal to that of the 12" service charge. But have we the lighter web powder in sufficient quantity to rebag 8" powder for use in 12", 14" and 16" guns? Will we have it on M Day?

Smoke may be very effectively used by the attacker. In all probability he would not in any case be able to see the defenders until on or near the beach so smoke would take away a few advantages and afford a great protection. Gun flashes from enemy artillery would be obscured but plane spot and mast head observers might partly compensate for the lost observation. Naval air has a 50 pound smoke bomb which will burn on the water for four minutes. Smoke curtains may be layed by two planes and smoke shells and smoke boxes would play their part. Even in darkness, a smoke screen would block the enemy searchlight and prevent his observation of our ships and advancing landing boats.

Air bombs dropped on the beach prior to the arrival of the troops should take their toll and thoroughly demoralize the defender. An early flight along the beach dropping delayed-action bombs should produce its material and morale damage. These bombs may be set to explode at any time from one second to several hours later. The last bomb would be set to explode prior to landing; the enemy does not know their number or location; nerve racking, destructive and demoralizing—it could not be less. It is difficult to conceive just how a defender could prevent such an air action at night. Flares would illuminate the beach and target areas should be easy to locate—the water-line and inshore a few hundred yards.

If we could follow the sweepers with destroyers, tugs and cargo ships armed with land artillery, the 8" anti-SS howitzers and 155mm howitzers, and then, when within range, put on a bombardment with those guns, together with air bombs and smoke, much damage would be effected prior to the supporting ships reaching their firing positions. During such an advance at least one support vessel per sector should be assigned to fire on operating searchlights, as well as an air bombing of searchlight areas. We must stop the operation of enemy searchlights or mobile batteries will make it impossible to successfully sweep. If this is impossible then we must render them impotent with smoke.

Then, a period of silence—no firing—while the firing ships and tows reach their positions. The first bombardment has warned the enemy and, when it ceases, he mans his defenses. Then the firing ships open with every available gun. Would it catch him unawares? Would it work? I do not know. But one thing is certain—we must find some method that will work.

If secrecy and surprise has actually been effected up to this time, then we must decide whether to assume the risk, retain surprise and hope that our landing boats will override the wire and cut through all but the very strongest, or engage in a long preliminary bombardment.

The question of firing from landing boats as they advance to the beach is a ticklish one. It is dark—4,000

yards to go—a slight change in course would cause fire of one boat to make targets of other boats.

The use of light tanks in the initial landing is being advocated by many students of this problem. If it is practicable, and I see no reason why it should not be with the proper vehicle of approach, we may well imagine the destruction to beach defense machine gun nests and small strong points which might be inflicted by a line of light tanks hitting the beach with the first wave.

We used to have old battleships and monitors which could be deliberately risked in supporting these operations, but now they all are scrapped. The new 26,000 yard 155mm gun in the hands of the defender will make it extremely hazardous for a transport, heavy cruiser or light cruiser to get within range, but this gun will not seriously damage a battleship. As battleships and heavy cruisers are the only ships that can outrange these guns, then, if we wish to land against an organized defense, we must use these ships and we must make their fire effective. If they can bombard the beach and then search the rear areas they may so destroy and demoralize the enemy supports and reserves that when the attacker has crashed through the beach defense there will be greatly reduced enemy reserves capable of making a counter-attack.

We frequently hear discussion about the number of combatant ships that may be absent; how the enemy action may influence the amount of naval support available; that heavy ships, carriers and heavy cruisers may be on other missions; and that proper naval support cannot be furnished.

That may partly be true in a combined Army and Navy expedition, where large Army forces are attempting an invasion, with a base already established, but this is a Fleet job, and, as the Fleet will be unable to function efficiently without a base, the *necessary* support *must* be made available or the seizure of the base delayed until it is available.

Special ammunition will be necessary—high explosive, shrapnel, smoke, star shells, flares, special bombs. Ammunition ships will accompany the expedition and requisitions by the supporting ships will be filled prior to the attack. The quantity and type cannot be determined until a decision has been made as to the general tactical and supporting plan. Another reason for an early decision.

In ten minutes, one 14" battleship could, at a range of 13,000 yards, put 140 14" shells on the beach, and each shell would make a crater five feet deep and 25 feet in diameter. But too many craters are a hindrance to the attackers' advance. Furthermore, such shells certainly destroy whatever they hit, but they do not hit often enough. We want a shell that will spread its damage laterally and search the area within its explosive radius and not simply bury itself in the ground and then burst in the air, leaving a deep crater. In the naval attack on the Dardanelles forts, a gun could be put out of action only by a direct hit.

I have briefly mentioned the instruments we have available. We now pound the beach with the most intensive bombardment of which the firing ships are capable.

How long that bombardment should last we do not know. We do know that thirty minutes was insufficient at "W" and "V" beaches at Helles.

We also know that in spite of the criticism of naval

gun fire, the mobile army artillery failed again and again to destroy the Turk's wire and trenches.

I have analyzed 250 reports of naval gun fire at Gallipoli—139 from the naval viewpoint and 111 from army viewpoint and other sources not naval. Some of these cases are repeaters, reported by different sources. My score reads: Favorable, 169; favorable with limitations, 14; unfavorable, 42; unfavorable with limitations, 25. By limitations, I mean that with certain possible corrective measures, they might have been classed as favorable. I doubt if an analysis of army artillery fire at Gallipoli for the same number of incidents would present a higher score.

A naval experimental practice at an area prepared for strong defense might produce some definite data on the subject.

The troops have reached that point in the advance to the beach where we must lift our fire to avoid firing on them.

What does our fire plan now call for?

We have star shells, flares and searchlights to illuminate the area. It will soon be daylight. We have spotting by planes and direct observation from firing ships. We must rake the area from the water's edge to at least 1,500 yards inland in order to catch the enemy beach defense supports and reserves. We must be prepared to shoot up and bomb the area to the limit of our ammunition, always bearing in mind that our ammunition allowance must be considered in relation to the possibility of naval action with the enemy surface vessels in the theatre of operations.

We know the number of guns available.

We know the frontage each ship must cover.

We know how long the beach bombardment will last.

We can fire at least one salvo per minute.

From this we can determine the number of salvos required and the time to commence this searching fire.

If smoke has not been laid by some other methods, then just before the troops land a salvo of smoke shell should be dropped about 1,000 yards back from the beach and maintained until the first troops have completed their landing and are ready to advance.

From then on, until communication from the beach directs otherwise, we must maintain a steady fire on enemy rear areas. The amount of ammunition available will effect the intensity of this fire, but we may assume at least one round per gun per five minutes.

When the entire covering force, that is the first four waves, are ashore and ready to advance, the fire is in accordance with the pre-arranged fire schedule or on request from troops ashore.

GUNNERY COMMUNICATIONS

A word about gunnery communications as distinguished from communication in general.

At the Dardanelles, the Fleet was hampered by the lack of information in its endeavor to support the troops. The Navy's unavoidable difficulties in picking up shore targets were seriously increased both by inadequate signal arrangements ashore, and by an omission to provide the supporting ships, before the landing began, with full information regarding composition and tasks of the various portions of the force.

Shore signal stations were opened punctually, but too often they were unable to get into touch with anyone in authority on land who could give the fleet the information it most required.

Ships' logs indicate many messages between ships showing lack of information. At other times ships asked in vain for a point of aim when called upon to "open fire at once."

In reply to a message from the *Sapphire* asking if her fire was doing any good during one of the Turkish attacks, the shore station replied—"Impossible to watch your fire at present."

An extract from the log of HMS *Euryalus* (flag of Admiral Wemyss) on April 27th, is of interest.

8:55 am Shore station to *Euryalus*.
Open fire on 168.K.2.
9:16 am *Euryalus* to *Swiftsure*.
Can you open fire on 168.K.2 or shall *Euryalus*?
9:40 am *Euryalus* to *Swiftsure*.
Aeroplane has been sent for to spot on 168.K.2.
9:55 am Adm. Wemyss on *Euryalus* to Adm. Nicholson on *Swiftsure*.
If you require an aeroplane for observing your fire on 168.K.2 will you communicate with aerodrome at Tenedos?
10:00 am Adm. Nicholson to Adm. Wemyss.
Request that *Euryalus* fire on 168.K.2, as we are firing on another important target.
10:05 am *Implacable* to *Euryalus*.
Borders report enemy advancing in large numbers on 168.K.2.
10:05 am Adm. Nicholson to Adm. Wemyss.
Your 0955 I have already got an aeroplane spotting on 169. Our range is not quite clear for 168.K.2.
10:20 am Vice Admiral CinC. to all ships.
Open fire on 168.K.2.
10:28 am 87th Brigade at "X" beach to *Euryalus*.
Enemy reported advancing down valley in 168.K.2.

They never did fire on 168.K.2.

During the evacuation of "Y" beach on 26 April, the *Queen Elizabeth* could get no answer by wireless from any supporting ship. It subsequently transpired that wireless gear of supporting ships was temporarily out of action while they were hoisting in the wounded.

About 5.00 p.m. on 25th April, at Anzac, the fleet received a message that an officer had been trying to send back since 12 o'clock noon regarding the location of two Turkish guns near Andersons Knoll. In fifteen minutes the naval gun fire opened on Andersons Knoll and the guns were silenced.

At "V" beach on April 25th, the attack was held up by wire entanglements, plainly visible to the *Queen Elizabeth* and the *Albion*, at a range of less than a mile, but neither vessel knew enough of the position ashore to be able to open fire. For the next hour, the sailors were obliged to stand idly by, while in full view of them, brave men continued to lose their lives in cutting the wire by hand.

Previous to landing it was believed that supporting ships would afford ample means of communication, but the above incidents, which are only a few of the many, clearly indicate that this hope was not realized and left much to be desired.

To this fact we may attribute much of the criticism of naval gun fire in the early stages. It was difficult to pick up the target from the sea and at times ships had to abstain from firing altogether for fear of danger to their own troops or content themselves with random fire. On some occasions ships would even have to wait for corrections from a spotting plane until a destroyer could bring the message from the landing ground at Tenedos.

Communications between the transports at sea and in the harbor fell down. This was a naval function and it had been thought the regimental signalers embarked on these transports would function. They did—at short distances with Morse and Semaphore, but they could not

read nor use the flag hoists necessary for long distances nor could they attract the attention of individual ships. This resulted in a greater demand on naval ratings than the navy could supply.

When it came to dispatch boats, guard boats for delivering radios, cables, orders, etc., between ships and shore, there were not enough small craft, and great delay.

Enough has been said to show the great importance of gunnery-communications in operations of this nature.

Our communication details must go ashore with the first wave. They too will suffer casualties and we must provide, in subsequent waves, an ample replacement in signal personnel. Too many will do no harm and all can be used in forward areas. Too few may be the cause of a very critical situation.

We must have a gunnery-communication officer forward with the troops just as we have a naval gunnery liaison officer.

Let us assume that Colonel M is to attack Hill 150 at 1,000. He tells the naval gunnery officer that he wants a concentration on hill 150 from 0,940 to 0,955. The gunnery officer must get that information back to the proper supporting ships, and it must get back prior to 0,940, indicating target, time commenced, intensity of fire, time to lift and time to cease fire. The regimental message center is up to its neck in sending and receiving messages by every method from runner to wireless. To get this message through, it must go back to the beach via BHQ and FHQ. Even if delivered, much time is lost and Colonel M wants that fire *when* and where he wants it. The most direct communication to the supporting ships is needed. To get this, we must have a naval communication group, or a marine group, solely assigned to gunnery messages, which goes forward with the leading troops. If this group cannot function at battalion headquarters, then it must be as far forward as possible and maintain runner or visual communication from the troop commander to the group.

These groups might be placed under the gunnery officer and serve a dual purpose—observation and communication. Such a group, when the British, on August 9th, crossed the ridge on Chunuk Bair and were dashing down toward Maidos with the Turks in retreat, might have changed the history of the World War.

We may then conclude that gunnery-communication is a *most important* essential in the establishment of a beach head.

AIR FORCES

Aircraft will play a tremendous part in any landing operation both for the attack and the defense. As time prevents a detailed discussion of its many phases, I will merely mention some of the tasks that may be assigned to it.

1. Distant, tactical and battle reconnaissance.
2. Destruction of enemy air forces.
3. Spotting for naval and land artillery.
4. Bombing enemy ships, positions, airdromes, shore batteries, roads, depots, bridges, etc.
5. Use of flares and laying down smoke.
6. Operation from floating bases and preparation of landing fields for land bases and emergency fields.
7. Transportation of combat groups and evacuation of sick and wounded, by transport planes.
8. Supporting troops by combat action with machine gun fire and bombs.
9. Special planes for use by CinC's and CG's staff to gain first hand information of the situation at any particular time.
10. Photography. May be very important in the preliminary reconnaissance. A photograph often discloses that which the eye failed to see.
11. The assembly and operation of planes carried on AP's and

AK's. The unavailability of nearby island bases or landing fields near the landing area, might make the CV's the only available place to accomplish this.

12. The co-ordination and control of all of the above activities.
13. The determination of the powers and limitations of the air force present and the allocation of priority in assignment of air tasks.
14. The preparation of the air plan.

Lack of air spot was one of the greatest handicaps suffered by the British Navy at the DARDANELLES.

If the naval attack on the Straits or the army operation at GALLIPOLI were refought tomorrow, and both sides had an efficient air force, the campaign would present many strange angles not contemplated as it was fought.

TACTICAL PLAN

I have frequently, in this paper, referred to a tactical plan. I have tried to present the major elements that go to support that plan. When all of the forces and agencies that are contributing their naval and military effort to execute a plan have produced a solution to their individual tasks; when these individual tasks have been co-ordinated and tied together in a general plan by the respective naval and marine commander; when both naval and marine plans have again been analyzed by the staff of the CinC and approved by him; then, and only then, do we have a tactical plan.

CONCLUSION

Accepting the premise that a fleet cannot function without a base, I have tried to point out in this and previous articles:

That, in case of war, the Marines will be required to seize a fleet base;

That the Navy will have to land the Marines and furnish the necessary support;

That it is a most difficult operation to put a landing force on the beach;

That it is essential that, once landed, this force must receive powerful and adequate support;

That our naval force is weak in certain essentials necessary to that support;

That this weakness is due, in part, to lack of suitable equipment, lack of suitable gun fire and ammunition, and a lack of thorough comprehension and understanding of the details essential to its preparation and execution;

That this lack of understanding is due to lack of combined training;

That material readiness may be achieved even though personnel readiness is not all that is to be desired;

That improvement and development of material readiness for landing operations is a matter of great and vital importance to the Navy and Marine Corps;

That experimental exercises with landing boats, guns, ammunition, tanks, aircraft, bombs, smoke, land and underwater obstacles, fire control, observation, spotting, communications, by day and by night, with present and newly developed equipment and material, should be made a part of the fleet major training schedule and not relegated to an occasional investigation;

That the naval service has a laboratory ready and capable of conducting these experiments;

That a consistent, constructive effort to remedy the present deficiencies in naval support can be remedied;

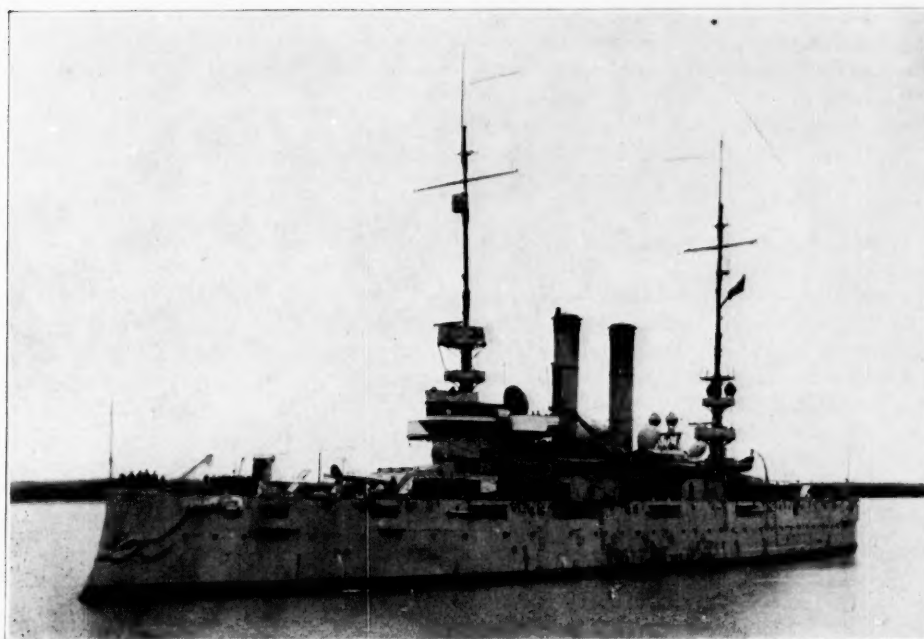
And finally:

That we have two courses of action open to us; to utilize the mental, material and financial means available to produce an organization trained and equipped for success, or remain in the fog and risk failure.

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U. S. S. Rochester in Nicaragua, 1929

The Rochester Hauls Down Her Colors

■ On September 7, 1888, an Act of Congress authorized the construction of Armored Cruiser No. 2, and on December 2, 1891, the ship was launched at the shipyard of William Cramp & Sons, Philadelphia, Pa., and christened U. S. S. *New York* after the great city of that name. She went into her first commission at Philadelphia August 1, 1893, the last word in naval construction and design justly known as "the Pride of the Navy."

When the name *New York* was assigned to the new super-dreadnaught on February 16, 1911, the name of the armored cruiser was changed to U. S. S. *Saratoga*, and she sailed under that name until December 1, 1917, when the historic name *Saratoga* was assigned to a newly laid down battle-cruiser and the name of U. S. S. *Rochester* was assigned to the old *New York*. Under this name the old cruiser served with efficiency and distinction until April, 1933, when it was decided that her life of usefulness to the Navy was finished and she went out of commission at the Navy Yard, Cavite, P. I., hauling down the ensign for the last time on April 29, 1933, and classified as "awaiting disposition by sale."

The *Rochester*, ex *Saratoga*, ex *New York*, had a load displacement of 8,900 tons, length 384 feet, beam 64 feet 10 inches, extreme draft 26 feet 4 inches, original speed 21 knots, though reduction of boilers and engine power in her old age reduced this speed to about 12 knots in her latter days. Her contract cost was \$2,985,500, considered a stupendous sum to spend for a ship in those days. Her original complement was 34 officers and 525 enlisted men, 2 officers and 64 men being Marines. Her original battery consisted of six 8-inch B. L. R., 12 4-inch R. F. G., 8 6-pounder D. S., and 4 Hotchkiss 1-pounder; later changed to four 8-inch B. L. R., ten 5-inch R. F., eight 3-inch R. F., four 3-pounder R. F., and four 30-caliber automatic.

The armored cruiser *New York* was the fifth ship of the name in the U. S. Navy, the first one being a gondola, 3 guns and 45 men, in the Lake Champlain fleet of General Benedict Arnold, burned at Crown Point, N. Y.,

October 13, 1776. The second *New York* in the Navy was a ship of 1,130 tons, 36 guns, built at New York in 1799, attached to the West India Squadron in 1801, flagship of Commodore John Rodgers in the Mediterranean in 1802-03, and burned at Washington Navy Yard in 1814. The third *New York* was a ship-of-the-line laid down at Norfolk in 1818 and burned in 1861 when the Navy Yard there was abandoned to the Confederacy. The fourth *New York* was a screw sloop of 2,490 tons laid down at New York but never completed. Her name was changed to *Ontario* in 1869 and she was sold in 1888.

First commissioned on August 1, 1893, under command of Captain John W. Philip, she went on a "shake-down" cruise to the South Atlantic. In August, 1894, she became the Flagship of the North Atlantic Squadron and during the Spanish-American War she carried the flag of Rear Admiral W. T. Sampson, commander-in-chief of the U. S. Naval Forces operating against the Spanish Forces in the West Indies and Caribbean waters, being his flagship at the Battle of Santiago, July 3, 1898, in which the Spanish Fleet under Admiral Cervera was completely destroyed. During this famous battle the Fleet Marine Officer was Major Robert L. Meade and First Lieutenant Rufus H. Lane was attached to the *New York* and received honorable mention for his part in the action. From 1901 to 1904 she was Flagship of the Pacific Squadron and returned to the Atlantic and went out of commission at Boston Navy Yard March 31, 1905.

Again commissioned in 1909 she went to the Mediterranean with the Armored Cruiser Squadron, returning to the North Atlantic Fleet to go into reserve in December, 1909. Recommissioned April 1, 1910, she was assigned as Flagship of the Asiatic Fleet where she remained until 1916, when she was transferred to the Pacific Fleet, joining the Atlantic Fleet in 1918 to become Flagship of the Destroyer Force. She remained on this duty until 1923 when she was designated as Flagship of the Special Service Squadron protecting American interests in Caribbean waters. It was as Flagship of the

Caribbean Special Service Squadron that the *Rochester* became familiar to thousands of Marines on Expeditionary Duty in the "unsettled countries to the south of us," especially to the Marines who served in Nicaragua from 1925 to 1932 was she familiar on the east and west coasts. In 1932 the *Rochester* was ordered to the Asiatic Fleet and there she served until she was decommissioned "for a full due" on April 29, 1933.

The first Marine Detachment to join the *Rochester* on the day of her commissioning as the U. S. S. *New York*, August 1, 1893, consisted of 64 enlisted men and was commanded by Captain B. Reeves Russell, and a few weeks later First Lieutenant L. H. Moses joined the ship as junior officer of the Marine Guard. The last Marine Detachment serving on the ship consisted of 40 enlisted men and was commanded by First Lieutenant R. A. Anderson with Second Lieutenant S. T. Clark as the junior Marine officer. This detachment was transferred from the ship at Shanghai, China, on March 17, 1933, to the Fourth Marine Regiment, prior to the last voyage of the old ship from Shanghai to Cavite, P. I.

During the forty years that intervened between the above mentioned dates, 1893-1933, just sixty officers of the Marine Corps have been attached to the U. S. S. *Rochester*, ex *Saratoga*, ex *New York*, as follows:

	JOINED	DETACHED
Capt. B. R. Russell	Aug. 1, 1893	July, 1896
1st Lt. Laurence H. Moses	Nov. 22, 1893	Aug. 2, 1894
2nd Lt. Albert S. McLemore	Aug. 14, 1894	Dec. 18, 1894
2nd Lt. Elisha Theall	Dec. 22, 1894	May 29, 1895
2nd Lt. Rufus H. Lane	May 18, 1895	Nov. 6, 1898
Capt. Richard Wallach	July, 1896	Mar. 31, 1898
Major Robert L. Meade	Apr. 27, 1898	Aug. 23, 1898
Capt. Mancil C. Goodrell	Apr. 5, 1898	July 5, 1898
2nd Lt. Smedley D. Butler	Sept. 24, 1898	Feb. 11, 1899
Capt. E. R. Robinson	Nov. 2, 1898	Jan. 19, 1899
Capt. Thomas N. Wood	Jan. 19, 1899	Nov. 15, 1899
1st Lt. Hirman I. Bearss	June 13, 1899	Oct. 20, 1899
Major B. R. Russell	Nov. 15, 1899	May 23, 1900
1st Lt. Charles H. Lyman	Nov. 19, 1899	Mar. 30, 1900
Major Charles A. Doyen	May 23, 1899	Nov. 20, 1900
1st Lt. J. S. Bates	May 10, 1899	Sept. 12, 1900

	JOINED	DETACHED
1st Lt. H. C. Reisinger	Sept. 14, 1900	Nov. 17, 1900
Capt. Frederick H. Delano	Feb. 16, 1901	July 27, 1901
2nd Lt. Wandell Foote	Feb. 16, 1901	Mar. 7, 1901
2nd Lt. Austin R. Rogers	Mar. 9, 1901	July 27, 1901
1st Lt. Wade L. Jolly	Aug. 22, 1901	Dec. 20, 1901
Capt. David D. Porter	Sept. 28, 1901	Oct. 20, 1901
1st Lt. Dickinson P. Hall	Dec. 19, 1902	Mar. 31, 1905
Capt. Ben H. Fuller	Jan. 9, 1903	Sept. 14, 1903
1st Lt. Franklin B. Garrett	May 15, 1909	Jan. 4, 1910
1st Lt. William E. Parker	Apr. 2, 1910	Oct. 16, 1910
1st Lt. Benjamin A. Lewis	Oct. 16, 1910	Mar. 26, 1912
2nd Lt. George H. Osterhout	Mar. 16, 1912	May 26, 1912
1st Lt. Edwin N. McClellan	Apr. 5, 1912	July 14, 1912
2nd Lt. Harry W. Weitzell	June 1, 1912	June 12, 1912
2nd Lt. Adolph B. Miller	June 15, 1912	Feb. 1, 1913
Capt. Ellis B. Miller	July 12, 1912	June 5, 1915
1st Lt. Charles S. McReynolds	July 12, 1912	
2nd Lt. John A. Gray	Mar. 24, 1913	Nov. 19, 1914
2nd Lt. Ernest C. Williams	Mar. 19, 1913	Apr. 14, 1913
2nd Lt. John L. Doxey	Dec. 8, 1914	Aug. 7, 1915
1st Lt. William C. Powers, Jr.	June 7, 1915	Dec. 22, 1915
2nd Lt. Louis M. Bourne, Jr.	July 23, 1915	Dec. 17, 1915
Major Carl Gamborg-Andresen	Aug. 16, 1915	Dec. 23, 1915
2nd Lt. John A. Gray	Dec. 17, 1915	Nov. 6, 1915
1st Lt. Blythe G. Jones	Jan. 25, 1923	June 23, 1923
Capt. James M. Bain	June 15, 1923	Apr. 18, 1925
1st Lt. Lades R. Warriner	Jan. 30, 1923	June 24, 1924
Major Edward W. Sturdevant	July 26, 1923	Nov. 30, 1924
Capt. John W. Thomason, Jr.	Apr. 10, 1925	Feb. 16, 1927
2nd Lt. William R. Hughes	June 27, 1924	June 27, 1926
2nd Lt. Kenneth B. Chappell	June 11, 1926	Apr. 3, 1928
Capt. Franklin A. Hart	June 22, 1927	July 21, 1928
Capt. Merrit A. Edson	June 28, 1928	Aug. 30, 1929
2nd Lt. Laramie D. Snead	Apr. 3, 1928	Feb. 11, 1930
Capt. Frank Whitehead	Aug. 16, 1929	July 17, 1931
2nd Lt. Laramie D. Snead	Apr. 2, 1930	June 13, 1930
Capt. Bernard Dubell	Feb. 20, 1930	July 16, 1931
2nd Lt. Robert B. Luckey	June 10, 1930	Feb. 20, 1932
1st Lt. Raymond A. Anderson	Mar. 10, 1932	Mar. 17, 1933
2nd Lt. Saville T. Clark	Feb. 22, 1932	Mar. 17, 1933
Major Thomas S. Clarke	May 29, 1925	July 25, 1925
	Apr., 1926	Feb. 1, 1927
Major David L. S. Brewster	June 15, 1927	Apr. 18, 1929
Major DeWitt Peck	May 17, 1929	Feb. 10, 1930
	Mar. 27, 1930	May 12, 1930
	Aug. 13, 1930	June 20, 1931
Major Matthew H. Kingman	June 18, 1931	Feb. 23, 1932



AN OFT REPEATED MANEUVER

Drawn by John W. Thomason, Jr.

Marines from the U. S. S. *Rochester* Landing in Central America to Protect American Interests

"Up All Hammocks"

BY CAPTAIN RUSSELL I. WHYTE, F.M.C.R.

■ Some little time ago, on the 15th of November, 1929, to be exact, Headquarters of the United States Marine Corps followed the advice of the poet Longfellow and "Shot an arrow into the air." Where that arrow was destined to fall no one knew or would hazard a guess.

The bow propelling this arrow was made of the same sturdy oak of which "Old Ironsides" was constructed and the thongs which bent this bow were made from the tough sinews of those who go down to the sea in ships and who allow no compromise with defeat.

Starting with a low trajectory, this arrow traveled some distance before it found its mark and came to rest in the heart of a new ship to be christened the 20th Marines.

Launched at the beginning of a depression, it was evident that this craft could not be anchored in a well laid out armory where canvas could be bent and seams caulked. But believing that the time to dry dock had arrived, the 20th sent out a landing party and was able to locate, through its scouts, a harbor, which was slated to be torn down during the next year or so.

But what a harbor! Only the wildest imagination could foresee how it might be developed into the resemblance of the armory that was desired.

Taking a couple of deep breaths, the 20th then started out on its mission of reaching its objective. With a handful of "Hope-to-be-Marines," buckets of water, paint, sand, squeegees and other implements so dear to the heart of the "swab crew," it bore down.

On April 30, 1930, it held its first formation, which took the form of a christening, presided over by the Major General Commandant, Ben H. Fuller, and assisted by Colonel J. S. Turrill, then officer in charge of reserve activities. At this formation the 20th was able to log its own bit of history, for here it received the first Stand of Colors ever to be presented to a reserve regiment in the entire history of the U. S. Marine Corps.

In order to save time and space let us skip over that part of the story in which the 20th made its first shake down cruise at Quantico and turn the pages of our log to the beginning of 1931.

Returning from Quantico, it was found that the story of this form of Marine Corps cruise had spread to such an extent that a number of men were anxious to get aboard, consequently by the 18th of March, 1931, the old 20th had the scuppers so well under it was necessary to overhaul, resulting in the building of two new compartments, the 23rd Marines and Brigade Headquarters troops.

Here again let us rapidly turn the pages of our history covering the two cruises at Virginia Beach with the wonderful cooperation of the officers and men of Hampton Roads, and refer those who might be interested in those phases to the log, as published in previous issues of THE MARINE CORPS GAZETTE and other places.

From remarks that have been overheard it is believed that the impression exists among some that the 6th Brigade is a fair weather outfit, whose sole object is to get in two weeks of camp during the year. Would it,

therefore, be out of place at this time to call to the attention of the regular Marine Corps some of the activities which we have undertaken since our return from camp?

Camp taught us that there was plenty to learn and plenty to do during the coming winter. With the finest bunch of enlisted personnel of any reserve outfit in Washington, D. C., or its vicinity, Colonel Meade, U.S.M.C., in charge of the Marine Corps Reserve and of whom we cannot speak too highly, and Lieutenant Colonel J. J. Staley, F.M.C.R., Commanding Officer of the 6th Brigade, felt that it would be a grave injustice to let things drift without some form of organized meetings. It was decided that a series of schools should be conducted and also, since a man does not become a Marine until he learns to shoot, some form of range work must be undertaken.

Having long since outgrown the original building utilized as an armory, the 6th was successful in obtaining, for an annex, an old church, which was also scheduled for demolition in the District's building plans. As this church would make an excellent site for small bore instruction, Captain Francis R. Geraci, F.M.C.R., was designated as Range Officer and Instructor. He, with a handful of volunteers, some metal from the Navy Yard and a few odds and ends of lumber, set out to build a range. The Marine Corps, realizing that we were in earnest about the whole matter, detailed Lieutenant Wm. W. Davidson, U.S.M.C., with 1st Sgt. Carl Wilck and Sgts. Sterling P. Roberts and Kenneth E. Harker of the Marine Barracks, Washington, as additional instructors. Recently Lieutenant Davidson was ordered to Annapolis to teach our future admirals how to shoot and the 6th had to lose his valued services. However, his efficient staff of NCO's have been left as assistant instructors and are putting in every afternoon and evening qualifying coaches.

Recently the range has been remodeled to give a 50 foot length and a 36 foot width. Twenty-four targets are arranged in two tiers and illuminated by twelve 120 watt lights. That this range is efficient is shown by the fact that Sgt. Harker recently scored 346 out of 350 in a test, and 1st Sgt. Wilck knocked off 580 out of 600 with a pistol.

A recent Brigade order requires that every man be qualified with the small bore before he is allowed to shoot the .30. Consequently considerable time has been put in by both officers and men in making the grade. Out of the first fifty men to shoot for record, six made expert, 11 sharpshooter and 20 marksmen. The balance will be back at a later date for another try. In addition to the qualification rounds the range is used for musketry instruction with landscape targets.

The Communications Platoon, under the command of Captain Windsor B. W. Stroup, F.M.C.R., has planned and is carrying out a full program. Arrangements have been made (it costs each man \$2.00 out of his own pocket) with the Naval Research Laboratories at Bellevue to permit the men of this unit to attend the Wednesday night classes on radio construction, held under the personal supervision of Commander Arps, U.S.N. Every

Monday night, classes are held by Captain Stroup in deciphering and enciphering code messages and a telephone and telegraph class, which includes a course of 21 lessons on installation, operation and trouble shooting, is being conducted by Mr. Szentpetry and Sgt. Jordan. Periodic meetings for instruction in blinker work and radio instruction have also been held and are being continued.

These classes are, of course, a part of the main curriculum of the 6th Brigade Schools. Captain C. G. Parker, Jr., F.M.C.R., Director of these schools, whose untiring efforts have made them the success they are, has outlined three objectives for them. The first phase is to develop instructors, commissioned and non-commissioned, within the Brigade and with the assistance of regular officers and NCO's from the U.S.M.C. This part, covering the period September to December, has been successfully brought to a conclusion and in carrying it out, not more than five members of the Brigade were admitted to any one class, thus permitting informal, close contact with the instructor and subject. The objective of this phase was to qualify each student as an assistant instructor by the end of the period.

The second phase (January-March), which we have not entered, is one in which the previous students become assistant instructors. These classes are open to all officers and NCO's of the Brigade as well as certain privates, first class, and privates. The courses in this phase cover all pertinent subjects with an objective of training additional instructors and increasing the professional qualifications of the Brigade.

The third phase, according to Captain Parker, will cover the months of April, May and June. Classes are to be thrown open to all members of the Brigade and school activity increased with the addition of other courses. The objective of these courses is to give a final polishing up of all members of the Brigade so that it can go to camp qualified in the rifle, machine gun, the automatic rifle, minor tactics, map making, sanitation and first aid.

We would like at this time to give just a brief syllabus of one or two of the courses so that the reader will gain a slightly better conception of what we are trying to accomplish in these evenings which have been sacrificed to study.

At the Candidates' Class held on 18 January, the period was divided into two parts, the first one of which took the form of a lecture on Interior Guard Duty and the second part was used as a practical demonstration of Formal Guard Mount in which the points brought out in the lecture were firmly (as a regular Gy. Sgt. of the Marine Corps can do it) driven home.

The Corporals' Class has been devoting a large part of its recent meetings to a study of the automatic rifle, covering a general description, field stripping and assembly, detail stripping and assembly, functioning, stoppages, care and cleaning, classes of fire, fire characteristics, employment, etc. Later on the classes will be used for a review of the duties of corporals, military definitions, school of the soldier, extended order, musketry, scouting and patrolling, combat principles of the squad and section, etc.

The Machine Gun School, held on Thursday evenings, covers disassembly, assembly and head space, care and cleaning, immediate action, functioning and stoppage, mounting and dismounting, loading and unloading, sighting and aiming, manipulation target, grouping and ad-

justing, traversing, combined searching and traversing, 1,000 inch range firing on targets A, B, C, D and E, as well as firing on the 600, 700, 800 and 1,000 yard ranges.

On Saturday afternoons of each week, weather permitting, a series of classes are held at Quantico, through the courtesy and cooperation of the officers and men of that Post. These classes in minor tactics and musketry problems are for the instruction of officers, non-commissioned officers and candidates for commission. Later in the year, when the weather permits more liberties, it is planned that more of these classes be held and that the entire Brigade will be able to qualify with the .30 calibre rifle before camp. It is sincerely hoped that the 6th Brigade will not wear out its welcome at Quantico, for in addition to the practical and worth while instructions received, there is an opportunity for those men who have not had a previous knowledge of the Marine Corps to obtain that experience first hand and under ideal conditions.

The Brigade is very proud, and believes that it is justly so, of its Medical Detachment. Staffed by Naval Reserve Officers and manned by Hospital Corpsmen enlisted by the Marine Corps Reserve, it has carried out successfully its mission in all of the camps and in giving physical examinations to recruits when at home. This particular (and we mean particular in more ways than one) unit is also increasing its efficiency by conducting a Hospital Corpsmen's Class. With Lieutenant Commander Don S. Knowlton, U.S.N.R., as Instructor and his staff consisting of Lieutenant William L. Schafer, Lieutenant (jg) Howard H. Strine and Lieutenant (jg) Lester M. Lucas, all of the U.S.N.R., they are fast approaching the mark set by them for the end of the period and have already prepared new targets for future firing.

One Saturday afternoon the writer was on the small bore range observing some of the men who were snapping in a few. He chanced to be standing near a work bench where one of the reserve Gy. Sgts., in civies, was loading clips for the relay that was on the line. Two men, also in civies, came in and stood by this particular bench to watch the firing, which was rapidly consuming the supply of loaded clips. The reserve Gy. Sgt., observing that the supply of loaded clips was being exhausted more rapidly than he could replenish it, asked these two onlookers to lend a hand, resulting in the following conversation:

Gy. Sgt.: "How about lending us a hand?"

Onlooker: "Say, buddy, who do you think you are? I'm a regular which just dropped in to look you half timers over."

Gy. Sgt.: "OK, Marine, no offense meant. Thought you might be one of the outfit. Your face looks sort of familiar. How long you been in the regulars?"

Onlooker: "My first hitch and, believe me, when it runs out in September, this baby don't ship over."

Gy. Sgt.: "Were you down at P. I.?"

Onlooker: "Yea, I went through that. Was drill instructor in '31."

Gy. Sgt.: "Well, I couldn't have seen you there because I went through Parris Island in 1917 and then went over with the 5th. Your face sure looks familiar though. Were you ever in Haiti or China?"

Onlooker: "No, I never got out of this country."

Gy. Sgt.: "Well, I could have sworn I had seen you in China or Nicaragua or somewhere but guess it must have been around town."

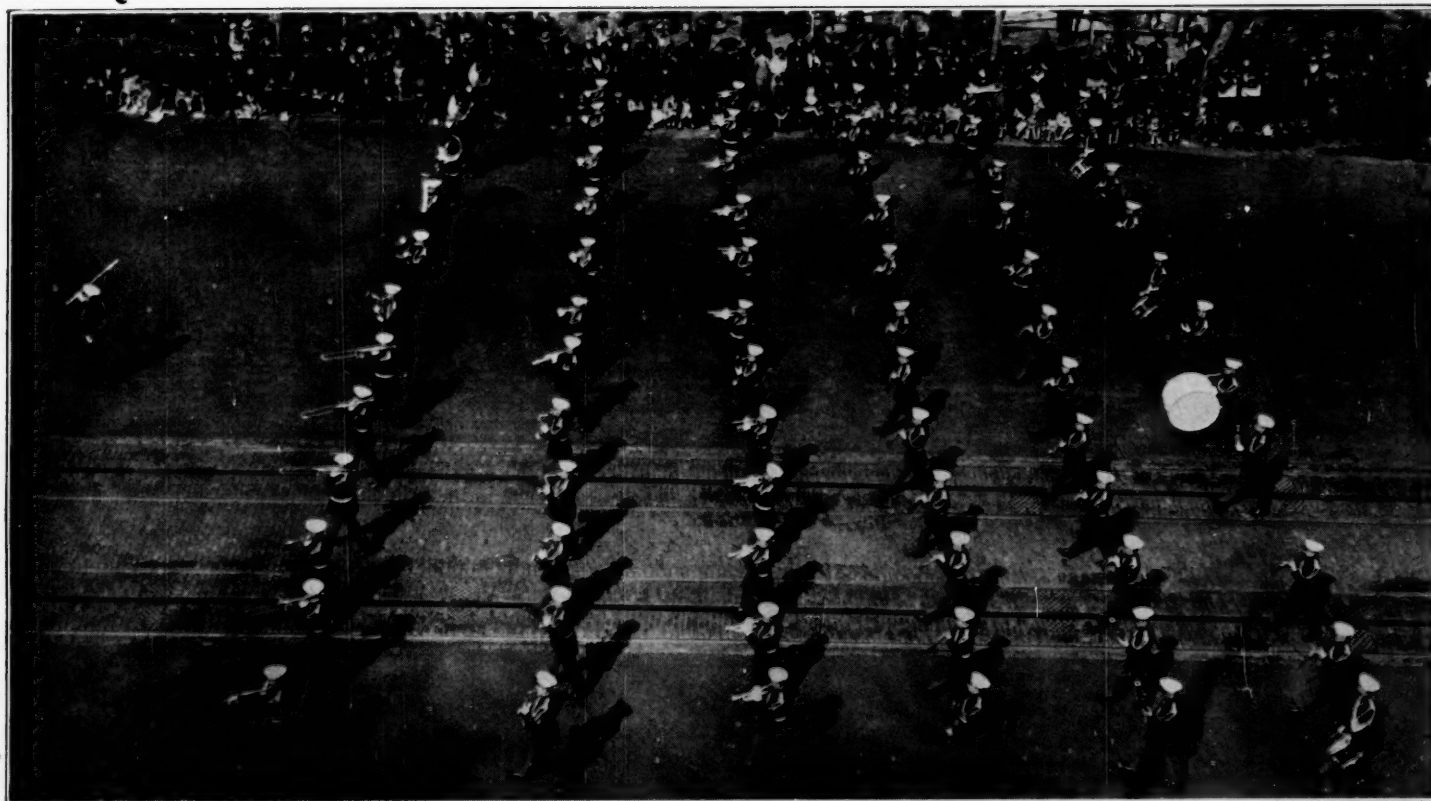
Rather an unusual incident in that it disclosed a Ma-

rine who had never been out of the country. But the Gy. Sgt. whose conversation is given above is not unusual on the roster of the 6th Brigade. The majority of the non-coms, as well as a number of the officers, although they may never have stood a watch on one of the seven decks of the good ship *Tuscarora*, know by personal experience how a shell hole in France may look and feel, or how a native Haitian can swing a machete.

It is not necessary to call to the attention of those in the regular Marine Corps the amount of time and effort consumed in furthering such activities as those outlined above. It would seem that the officers and men of the 6th, instead of being "half timers" are "double timers," for these activities are being carried out in addition to their regular duties of earning a living for themselves

and families. We feel that this is *YOUR* reserve and would like to stress the fact that *YOUR* reserve is putting in this effort to make *YOU* proud of it. We do not receive any remuneration for our services as is paid to other forms of national guard and military training. This effort is being made purely as a result of the inspiration set up by *YOU* and your predecessors in the United States Marine Corps.

May I, on behalf of the officers and men of the 6th Brigade, extend a cordial and sincere invitation to each and every one of you to visit us at our armory, 458 Indiana Avenue, N. W., Washington, D. C., whenever you are in the city. We want to feel that you are a part of us in our "home" as you have made us feel that we are a part of you when we were in your "home."



U. S. Marine Band in Parade Formation on Pennsylvania Avenue

The Economy Act

An Act to Maintain the Credit of the United States Government

BY CHIEF PAY CLERK GEORGE H. MULLIGAN, U.S.M.C.

■ An act to maintain the credit of the United States Government (Public No. 2—73rd Congress), was approved March 20, 1933. This act, among other things, repeals the provisions of the Economy Act of June 30, 1932, relative to the legislative furlough and 8 1/3% reduction in pay. It substitutes in lieu thereof a percentage reduction in pay based upon an index figure determined by comparison of the costs of living during the six months' period ending June 30, 1928, and the six months' period ending December 31, 1932, and each six months thereafter, such percentage to be announced by the President. The new reduction is applicable to all personnel, including enlisted personnel, and applies as well to all allowances, except allowances for travel.

The Executive Order of March 28, 1933, issued pursuant to the provisions of the above-mentioned Act, prescribes the percentage reduction in compensation for the period April 1 to June 30, 1933, as fifteen per cent.

Section 1 of Title II of the act provides:

Sec. 1. When used in this title—

(a) The terms "officer" and "employee" mean any person rendering services in or under any branch or service of the United States Government or the government of the District of Columbia, but do not include (1) officers whose compensation may not, under the Constitution, be diminished during their continuance in office; (2) the Vice President, the Speaker of the House of Representatives, Senators, Representatives in Congress, Delegates, and Resident Commissioners; (3) officers and employees on the rolls of the Senate and House of Representatives; (4) any person in respect of any office, position, or employment the amount of compensation of which is expressly fixed by international agreement; and (5) any person in respect of any office, position, or employment the compensation of which is paid under the terms of any contract in effect on the date of the enactment of this title, if such compensation may not lawfully be reduced.

(b) The term "compensation" means any salary, pay, wage, allowance (except allowances for travel), or other emolument paid for services rendered in any civilian or noncivilian office, position, or employment; and includes the retired pay of judges (except judges whose compensation, prior to retirement or resignation could not, under the Constitution, have been diminished), and the retired pay of all commissioned and other personnel of the Coast and Geodetic Survey, the Lighthouse Service, and the Public Health Service, and the retired pay of all commissioned and other personnel of the Army, Navy, Marine Corps, and Coast Guard; but does not include payments out of any retirement, disability, or relief fund made up wholly or in part of contributions of employees.

Section 2 of Title II of the act provides:

SEC. 2. For that portion of the fiscal year 1933 be-

ginning with the first day of the calendar month following the month during which this Act is enacted, and for the fiscal year ending June 30, 1934, the compensation of every officer or employee shall be determined as follows:

(a) The compensation which such officer or employee would receive under the provisions of any existing law, schedule, regulation, Executive order, or departmental order shall first be determined as though this title (except section 4) had not been enacted.

(b) The compensation as determined under subparagraph (a) of this section shall be reduced by the percentage, if any, determined in accordance with section 3 of this title."

Section 3 of Title II of the act provides:

SEC. 3 (a). The President is authorized to investigate through established agencies of the Government the facts relating to the cost of living in the United States during the six months' period ending June 30, 1928, to be known as the base period, and upon the basis of such facts and the application thereto of such principles as he may find proper, determine an index figure of the cost of living during such period. The President is further authorized to make a similar investigation and determination of an index figure of the cost of living during the six months' period ending December 31, 1932, and each six months' period thereafter.

(b) The President shall announce by Executive order the index figure for the base period and for each subsequent period determined by him under paragraph (a) of this section. The percentage, if any, by which the cost of living index for any six months' period, as provided in paragraph (a) of this section, is lower than such index for the base period, shall be the percentage of reduction applicable under section 2 (b) of this title in determining compensation to be paid during the following six months' period, or such portion thereof during which this title is in effect: PROVIDED, That such percentage of reduction (including reductions made under any existing law, regulation, or Executive order, in the case of subsistence and rental allowances for the services mentioned in the Pay Act of June 10, 1922) shall not exceed 15 per centum.

Section 4 of Title II of the act, among other things, continues in effect the provisions of the Economy Act of June 30, 1932, denying automatic increases of pay to officers by reason of length of service or promotion and extends that denial to enlisted men in so far as automatic increases due to length of service are concerned. It also repeals the provision contained in the Act of June 30, 1932, placing officers of the military services in a travel status under the same laws that govern reimbursement of travel expenses of civil employees from and after July 1, 1933. On and after that

date, officers performing travel will be reimbursed under the mileage and travel expense laws in effect prior to the enactment of the Economy Act of June 30, 1932.

The following is a synopsis of the decisions of the Comptroller General so far rendered on questions involved in the application of the new Economy Act to the military services:

The unused portion of 18 working days' legislative furlough for which deductions from compensation were made under the terms of section 101 (b) of the Economy Act and the rules prescribed by this office during the period July 1, 1932, to March 31, 1933, inclusive, may not be granted during the fiscal year 1934, but to permit employees to take such unused furlough during period between March 31 and July 1, 1933, would not contravene the law.

Adjustments may be made on the March pay roll—the amount to be withheld from the amount otherwise for impounding—to cover the excess deductions made on account of legislative furlough under the rules prescribed by this office in those cases where the amount deducted exceeds the equivalent of $2\frac{1}{2}$ days' pay for each month of service since June 30, 1932, and exceeds, also, the amount equivalent to $1\frac{1}{4}$ days' pay for each working day of absence on legislative furlough. (Comptroller General's decision, A-47718, March 23, 1933.)

The amount of furlough deductions made from compensation prior to April 1, 1933, or the amount of legislative furlough taken on or after that date may not be regarded as a factor in determining the rates of compensation to be paid for services on and after April 1, 1933, under the terms of section 3 of Title II of the act of March 20, 1933, Public No. 2, and executive order issued pursuant thereto. (Comptroller General's decision, A-48034, March 25, 1933.)

Between April 1, 1933, and July 1, 1934, enlisted men of the military and naval forces will not be entitled to automatic increase in pay for additional longevity credits. Administrative promotions of enlisted personnel when authorized by law and not automatic in character are not prohibited by the Economy Act amendments. (Comptroller General's decision, A-48029, March 31, 1933.)

The percentage reduction required by the act of March 20, 1933, in the compensation of military and naval personnel is for application to the maximum pay permitted by sections 7 and 8 of the act of June 10, 1922, or to commissioned warrant officers by section 2 of the act of February 16, 1929. (Comptroller General's decision, A-48029, March 31, 1933.)

Increases in compensation of enlisted men of the Army as the result of administrative selection under authority of law after qualification by the enlisted men are not prohibited as automatic promotions under section 201 of the Economy Act as extended by the act of March 20, 1933, Public No. 2, but the increase is subject to 15 per cent reduction under the terms of the later statute. (Comptroller General's decision, A-48132, April 4, 1933.)

Under section 215 of the Economy Act of June 30, 1932, as amended by section 4 (c) of the act of March 20, 1933, Public No. 2, officers and employees of the United States serving abroad will not be entitled to a refund or adjustment of compensation on account of transit time, and leave in connection with furlough

and leave with pay with which they may have been charged during the fiscal year 1933, prior to the enactment of the act of March 20, 1933. (Comptroller General's decision, A-48132, April 4, 1933.)

The cash allowance to enlisted men in lieu of quarters and rations when not furnished in kind except when traveling is subject to reduction on and after April 1, 1933, by the 15 per cent prescribed by Executive Order of March 28, 1933. (Comptroller General's decision, A-48029, March 31, 1933.)

The enlistment allowances payable to enlisted men in cash upon reenlistment within three months after discharge and the cash prizes for excellence in gunnery, target practice and engineering competition are not compensation as defined in the act of March 20, 1933, and are not subject to reduction by that act. (Comptroller General's decision, A-48029, March 31, 1933.)

ECONOMY PROVISIONS CONTAINED IN ACTS OTHER

THAN THE ECONOMY ACT OF MARCH 20, 1933.

Enlistment Allowance—Enlisted men of the Navy and Marine Corps are not entitled to enlistment allowance on reenlistment or extension of enlistment during the fiscal year ending June 30, 1934. This does not preclude the payment of enlistment allowances in the case of enlisted men who reenlist or whose extension of enlistment becomes effective on or before June 30, 1933. (See Section 18, Act of March 3, 1933, Public No. 429—72nd Congress.)

Additional Pay for Aides and Mounts (Marine Corps)

—During the fiscal year ending June 30, 1934, no officer of the Marine Corps shall be entitled to receive an addition to his pay in consequence of the provisions of the act approved May 11, 1908 (U. S. Code, Title 10, section 803), or of section 1261 of the Revised Statutes (U. S. Code, Title 10, section 692), providing additional pay for mounts and aides, respectively. (See Army Appropriation Act of March 4, 1933.)

Reserve Officers on Active Duty—During the fiscal year ending June 30, 1934, only one officer of the Naval Reserve above the rank of lieutenant and one officer of the Marine Corps Reserve above the rank of captain will be entitled to the pay and allowances of their respective grades and length of service. Other officers of the Naval Reserve or Marine Corps Reserve above the rank of lieutenant in the Navy, or captain in the Marine Corps, on active duty, during the fiscal year ending June 30, 1934, are entitled only to the pay of a lieutenant in the Navy or captain in the Marine Corps with 10 years' longevity pay. This has no application to officers of the Naval Reserve or Marine Corps Reserve of the rank of or below lieutenant in the Naval Reserve or captain in the Marine Corps Reserve nor to training duty, drills or other equivalent instruction or duty or appropriate duties. (See Naval Appropriation act of March 3, 1933.)

Section 12 of the Act of March 3, 1933 (Public No. 428—72nd Congress), provides:

Assignments of officers of the Army, Navy, or Marine Corps to permanent duty in the Philippines, on the Asiatic Station, or in China, Hawaii, Puerto Rico, or the Panama Canal Zone shall be for not less than three years. No such officers shall be transferred to duty in the continental United States before the expiration of such unless the health of such officer or the public interest requires such transfer, and the reason for the transfer shall be stated in the order directing such transfer.

Section 212 of the Economy Act of June 30, 1932, is permanent legislation. That provision makes a limitation on the amount of pay received by retired officers holding civil positions. In order that the record may be complete, that section is quoted herewith as follows:

(a) After the date of the enactment of this Act, no person holding a civilian office or position, appointive or elective, under the United States Government or the municipal government of the District of Columbia or under any corporation, the majority of the stock of which is owned by the United States, shall be entitled, during the period of such incumbency, to retired pay from the United States for or on account of services as a commissioned officer in any of the services mentioned in the Pay Adjustment Act of 1922 (U. S. C., title 37), at a rate in excess of an amount which when

combined with the annual rate of compensation from such civilian office or position, makes the total rate from both sources more than \$3,000; and when the retired pay amounts to or exceeds the rate of \$3,000 per annum such person shall be entitled to the pay of the civilian office or position or the retired pay, whichever he may elect. As used in this section, the term "retired pay" shall be construed to include credits for all service that lawfully may enter into the computation thereof.

(b) This section shall not apply to any person whose retired pay plus civilian pay amounts to less than \$3,000: PROVIDED, That this section shall not apply to regular or emergency commissioned officers retired for disability incurred in combat with an enemy of the United States.



INAUGURAL PARADE, MARCH 4, 1933
Marines Passing the Presidential Reviewing Stand

The Antiaircraft .50 Caliber Machine Gun

BY FIRST LIEUTENANT ANDREW J. MATHIESEN, U.S.M.C.

■ The Browning Machine Gun, .50 caliber, M1921, is recoil operated, belt fed, water cooled. The gun weighs 88 pounds with the water jacket filled, 66 pounds without water. It has a maximum rate of fire of 650 rounds per minute. This rate can be cut down to 400 rounds per minute by adjusting the oil buffer, but it has been found that the gun will not function automatically with the cyclic rate cut down this low. The best results are obtained with the cyclic rate of fire adjusted to 600 rounds per minute.

The machine gun is fed from a belt wound on a drum in a metal ammunition container attached to the cradle of the mount. Feeding is from the left side only. While the web belt is considered standard for use in AA machine guns, the metal link disintegrating belt is used. This is because of the angles at which the gun will be fired. There is too much chance of the cloth belt fouling the operating handle of the gun, thereby causing stoppages. There are 100 rounds to a belt. There is no difficulty in feeding the gun at high angles of fire from these containers.

Ammunition supply is a serious problem with any machine gun, and particularly so with the guns installed aboard ship. With the land gun, the ammunition container need not be fastened to the gun. It may be rested on the ground, and the ammunition will feed into the gun without trouble. While the ammunition can be rested on the deck with the present .50 caliber AA machine gun, difficulty will be run into in the feeding of the ammunition, particularly when the gun is swung through angles of arc at high elevations. The assistant gunners must be fast and accurate in the changing of the ammunition drums, and the men detailed to load the containers (in excess of the regular gun crew) must be fast working men. There is at present no satisfactory belt loading machine for the metal disintegrating belts furnished ships. All ammunition must be loaded by hand. A large reserve supply of ammunition must be kept in specially designed ready lockers on the machine gun platforms of the guns are to be kept functioning properly without interruption when targets present themselves.

The weight of a .50 caliber bullet is approximately 800 grains. The powder charge is 240 grains. The muzzle velocity of the .50 caliber bullet is 2,580 f/s. (The .50 caliber bullet has sufficient force to crack the cylinders of aircraft motors.)

The guns are water cooled, the cooling system being the same as that on the .30 caliber machine guns, the water jacket in this instance holding about 8 quarts of water. Water is not a serious problem aboard ship, as salt water can be used in the cooling system without injury to the gun. There is no condensing device used on the AA guns installed aboard ship.

The guns mounted on board the U. S. S. *Pennsylvania* were equipped with flexible water tubes for furnishing a constant supply of circulating water. There is some doubt in the mind of the writer of the advisability of using such a system. The present mount is very flexible, and it is believed that the flexible water tubes would be more of hindrance than an aid. The guns are capable of firing approximately 2,000 rounds (20 belts) without

the necessity of adding water. Water is easily added when needed.

The mount used for the .50 caliber guns at present is the Mark III. It is by far the most superior mount for AA machine guns produced thus far. It is so constructed as to give the gunner almost absolute freedom of motion, for elevation, train, and tipping or canting of the gun, but without the effect that the canting of a piece normally has. During the experimental camera gun practices conducted aboard the U. S. S. *Pennsylvania*, the gunners at no time experienced any difficulty in remaining on the target, once the target was picked up. In this practice, the planes were allowed to make normal dive bombing attacks on the U. S. S. *Pennsylvania*, from any direction except out of the sun. This was prohibited because of the impossibility of taking photographs for analysis into the sun. One of the attacks was made over the bow, the planes diving when they were directly over the foretop, thus causing the guns to be elevated at their maximum. The gunners were able to keep on the planes without trouble, and the developed films showed that the two forward guns were able to keep the planes under fire during the entire dive.

Attached to the cradle of the mount is a curved hollow pipe support for the gunner, which fits around the gunner's shoulders. The trigger mechanism is operated by a lever mounted on this support, and pressed by the thumb of the right hand. On the left side of the cradle, just below and a trifle forward of the lower portion of the left spade grip, is a handle, similar to those found on the elevating or training handwheels of broadside guns, for the gunner to grasp with his left hand, to aid him in maneuvering the gun and to steady it when on the target.

There is very little recoil to the .50 caliber gun when fired. Most of the recoil is taken up in the operation of the gun. There is a strong spring set in the cradle which absorbs the trunnion reaction in automatic fire. The character and weight of the gun is such, though, that fairly large men should be detailed to man them.

The .50 caliber sight Mark III is essentially the "Boyd-Greene" Antiaircraft machine gun sight as used by the U. S. Army for the Caliber .30 machine guns. Departures from the original design are for the purpose of adapting the sight for mounting on the .50 caliber cradle Mark III; altering the constants of the sight to suit the exterior ballistics of the .50 Caliber Browning Machine Gun; increasing the angle of lead to permit use of the weapon against faster planes. The original Boyd-Greene sight was based on a maximum target speed of 170 m/h.

The sight consists essentially of front and rear sight rings rigidly mounted, the distance between the rear of the front sight ring and the front of the rear sight ring being 16.70 inches. The center of the rear sight ring is 8.60 inches to the right of, and 8.60 inches above, the center line of the bore. The center of front sight ring is slightly offset from these dimensions. The outside diameter of the front ring is 0.75 inch. The inside diameter of the rear sight ring is 5.65 inches. The rear sight ring is provided with two vertical and two horizontal cross wires. These wires are arbitrarily divided into six equal spaces, to aid in approximating the proper

lead. The space between wires is 0.31 inch. No adjustment is provided for the rear sight ring. The front sight ring may be adjusted both vertically and horizontally. Regular equipment is furnished for the adjustment of the .50 caliber sights, full instructions coming with the equipment. Properly adjusted, a sight angle of 8 mils in elevation and a drift correction of 2.3 mils results, which values were chosen to set the sight for 1,500 yards range and 60 degrees elevation and are approximately correct for all combinations of range and elevation, maximum 3,000 yards and 85 degrees elevation, minimum approximately 800 yards and 5 degrees elevation.

The .50 caliber sight is by no means an instrument of precision. Its purpose is to provide the gunner with a means of applying to the problem of hitting the target his estimates, not necessarily conscientiously calculated, of the factors of target speed, range, and elevation, and target angle; and to aid him in observing, by means of tracer ammunition, the effect of his firing. The sight does this by furnishing a means by which the gunner may either "lead" the target by a given amount which he or some other estimates, or may traverse the gun back and forth along the path of the target in such a manner that his "pattern" sweeps continuously across the target.

The proper eye distance is that at which the front sight ring just appears between the two wires of either set (horizontal or vertical) on the rear sight ring. The target should be held in the center of the front sight ring.

During the experimental camera gun firings, the following organization of the gun crews was used: one gunner per gun; one assistant gunner, who tends to the replacement of ammunition, aids the gunner in the reduction of stoppages, and prevents his firing into the tops of his own ship; one additional man per two guns to aid in the replacement of ammunition and in the reduction of stoppages; one telephone talker per machine gun platform, connected with the AA control station; one non-commissioned officer per two guns to control the fire of those two guns. On the U. S. S. *Pennsylvania*, the machine gun platforms are below the fore- and main-tops. They are constructed in the shape of a four leaf clover, with a gun on each lobe of the leaf. Four guns are mounted on each platform. With this distribution of guns, the above mentioned distribution of men seemed to give the best results.

There is no system of fire control applicable to AA machine gun fire. While a system can be devised to give excellent results, the time consumed in determining the range, elevation, speed of target, target angle, etc., would be so great that the attacking plane would have made its attack and be gone before the guns could open fire. Each gun must work by itself, firing on targets when they are within range. In the dive bombing attacks, the gunners opened fire as soon as the planes began their dives. The dives are begun within the present maximum efficient range of the .50 caliber gun.

The greatest difficulty experienced was in picking up the target initially. This is due to the fact that the gunner must continuously search the sky for targets, and on bright days this is very hard on the eyesight. Properly colored goggles would be a very material aid in protecting the eyes of the gunners and in increasing their efficiency. Once the targets were picked up, the gunners experienced no difficulty in keeping on their targets.

The four guns on any platform would be divided between two non-commissioned officers for the purpose of control. The N. C. O. would designate the targets to the

gunners, give them their orders to commence firing on the target designated, and their orders to shift from one target to another to avoid having both guns firing on one target at the same time when two or more targets are within range.

Once fire is opened, the fire will be controlled by the gunner observing his tracers. This is the only method that can be successfully used. In order to make gunners efficient in the use of tracer ammunition, practices involving the use of tracer ammunition should be fired. Camera gun practices are fine for preliminary training to teach gunners how to stay on a diving target, but cross wire hits on the developed film would in all events be misses were the gunner firing live ammunition. Training is required in order to make a gunner proficient in the ability to follow tracers, and that ability can only be attained through the firing of problems involving the use of tracer ammunition. Gun camera practices are a total loss in that respect. For daylight firing, one tracer in every five rounds is used; in night firing, one in every twenty rounds. The present type of tracer bullet is not too satisfactory. It begins burning too soon after leaving the muzzle of the gun, giving off much white smoke where it is least needed, and very little out where the gunner needs the tracer to tell him whether or not he is on the target. It has the added disadvantage of distracting inexperienced gunners, who tend to pay too much attention to the flight of the bullet soon after it leaves the muzzle of the gun.

The N. C. O.'s in charge of the guns should be furnished with field glasses with which to search the skies. The present six power glass is not satisfactory for this work. It has too limited a field of vision, and the slightest jar of the hand tends to throw the target clear out of the field of vision. It has been suggested and recommended that N. C. O.'s be furnished with a glass of about 4x, with as wide a field of vision as possible.

It was further suggested and recommended that the machine gun platforms, instead of being made in the shape of a four leaf clover as they now are, be made circular, particularly the forward part of the foremast, and the after part of the mainmast platforms, to allow the installing of one more of the .50 caliber guns. It is believed that this would be practicable, and it would be a great aid in the fighting off of a section of light bombers. Light bombers will not normally make an attack on a battleship in such a manner as to come under the fire of the five inch anti-aircraft batteries. The weak spots of a battleship at present are its forecastle and its stern, insofar as attacks from the air are concerned. The installing of an additional gun on each mast would be a valuable asset in the protection of the ship against such attacks, and would not increase the difficulties of control.

The present day machine gun is a highly perfected piece of mechanism. It is capable of sustained, accurate, automatic fire, with a minimum of stoppages. The mount designed to go with the gun is so constructed as to allow the gun to be brought to bear on a target regardless of its angle of approach, and to allow the gun to function properly and to deliver accurate fire. Judging from the results obtained by the U. S. Army using the .50 caliber gun on a mount much inferior to the Mark III, and from the results obtained in the experimental firings, it is believed that, with well trained and competent gun crews, the .50 caliber anti-aircraft machine gun (Browning) mounted on the Mark III mount, will prove to be a very efficient weapon in the repelling of dive bombing attacks on battleships.

Notes and Comment

DECORATIONS

DISTINGUISHED SERVICE MEDAL

20 March, 1933.

LIEUT COL. CALVIN B. MATTHEWS, U.S.M.C.

For service in Nicaragua as set forth in the following:
CITATION:

"For exceptionally distinguished and meritorious service rendered the Government in the line of his profession in a position of great responsibility as Major General, Jefe Director of the Guardia Nacional de Nicaragua, from 6 February, 1931, to 2 January, 1933. During this period a continuous state of warfare existed on the far flung borders of the country against well organized, heavily armed groups of bandits operating under capable guerilla leaders who were attempting to overthrow the Government, pillage the country, and rob the peaceful and law-abiding citizens. The Guardia Nacional carried on continuous operations against these organized bandits; defeating them in many combats, and limiting their depredations so that the vast majority of the peaceful inhabitants were protected and enabled to carry on their normal occupations. After the disastrous earthquake, and the fire which followed, in the city of Managua in March, 1931, Lieutenant Colonel Calvin B. Matthews, U. S. Marine Corps, Jefe Director, Guardia Nacional, issued the decree proclaiming martial law and personally directed the operations of the Guardia Nacional in preventing looting, suppressing crime, evacuating the dead and injured, procuring food and supplies for the destitute, and in the restoration of law and order. Under his command, the Guardia Nacional performed outstanding service in the preservation of law and order during the Presidential Election Period of 1932. By its active operations against organized bandit groups and by the protection it furnished the voters and the electoral officials, it greatly assisted the United States Electoral Mission to Nicaragua to successfully carry on its mission in holding a fair and uninterrupted Presidential Election. By his tact, sound judgment, and sympathetic understanding of the situation in Nicaragua, many difficult problems were successfully solved by him, the conflicting elements of the two historical parties of Nicaragua were brought together and an agreement reached whereby former members of both parties have been commissioned in the Guardia Nacional and an orderly evacuation of the American personnel therein, and the turnover of the Guardia Nacional to Nicaraguan Control, accomplished; thus leaving the Guardia on a firm basis for its continued existence as a military organization capable of fulfilling its mission of maintaining peace tranquility throughout the Republic."



Lt. Col. Calvin B. Matthews,
U.S.M.C.

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Distinguished
Service Medal

For the President.

CLAUDE A. SWANSON,
Secretary of the Navy.

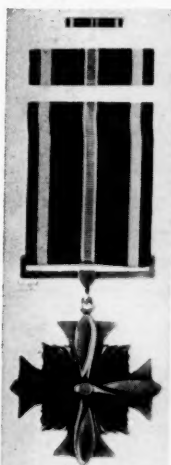
DISTINGUISHED FLYING CROSS

20 March, 1933.

GY. SERGEANT NEAL G. WILLIAMS, U.S.M.C.

For service in Nicaragua as set forth in the following:
CITATION:

"For extraordinary achievement in aerial flight as an airplane pilot attached to Aircraft Squadrons, Second Marine Brigade, operating in the Republic of Nicaragua. On 6 July, 1932, as pilot of an amphibian plane engaged with another on a liaison and combat patrol over thick jungle, after his plane had been struck five times within two feet of the cockpit by fire from the ground, in the face of continuing heavy fire he dropped bombs again and again on the area from which the fire came although he could not distinguish the enemy because of the heavy jungle. His courage and skill in attacking the enemy resulted in heavy casualties being inflicted on them by himself, the accompanying plane and a Guardia patrol that was directed to the area by the planes. As a result of this action the bandits never thereafter while airplanes were maintained at Puerto Cabezas attempted operations in that vicinity. On many other occasions Gunnery Sergeant Williams has carried out, often under dangerous flying conditions, reconnaissance and combat missions against hostile bandits with determination, skill and courage."



Distinguished
Flying Cross

For the President.

CLAUDE A. SWANSON,
Secretary of the Navy.

NAVY CROSS STAR

20 March, 1933.

FIRST LIEUT. LEWIS B. PULLER, U.S.M.C.

For service in Nicaragua as set forth in the following:
CITATION:

"First Lieutenant Lewis B. Puller, U. S. Marine Corps (Captain, Guardia Nacional de Nicaragua) performed exceptionally meritorious service in a duty of great responsibility while in command of a Guardia Patrol from 20 September to 1 October, 1932. Lieutenant Puller and his command of forty Guardia and Gunnery Sergeant William A. Lee, U. S. Marine Corps, serving as a First Lieutenant in the Guardia, penetrated the isolated mountainous bandit territory for a distance of from eighty to one hundred miles north of Jinotega, his nearest base. This patrol was ambushed on 26 September, 1932, at a point northeast of Mt. Kilande by an insurgent force of one hundred and fifty in a well prepared position armed with not less than seven automatic weapons and various classes of small arms



1st Lt. Lewis B. Puller,
U.S.M.C.

and well supplied with ammunition. Early in the combat, Gunnery Sergeant Lee, the Second in Command, was seriously wounded and reported as dead. The Guardia immediately behind Lieutenant Puller in the point was killed by the first burst of fire. Lieutenant Puller with great courage, coolness and display of military judgment, so directed the fire and movement of his men that the enemy were driven first from the high ground to the right of his position, and then by a flanking movement forced from the high ground to the left and finally were scattered in confusion with a loss of ten killed and many wounded by the persistent and well directed attack of the patrol. The numerous casualties suffered by the enemy and the Guardia losses of two killed and four wounded are indicative of the severity of the enemy resistance. This signal victory in jungle country, with no lines of communication and a hundred miles from any supporting force, was largely due to the indomitable courage and persistence of the patrol commander. Returning with the wounded to Jinotega the patrol was twice ambushed by superior forces on 30 September. On both of the occasions the enemy was dispersed with severe losses."

For the President.

CLAUDE A. SWANSON,
Secretary of the Navy.

NAVY CROSS STAR

20 March, 1933.

GY. SGT. WILLIAM A. LEE, U.S.M.C.

For service in Nicaragua as set forth in the following:

CITATION:

"Gunnery Sergeant William A. Lee, U. S. Marine Corps (First Lieutenant, Guardia Nacional de Nicaragua) distinguished himself by extraordinary heroism in the line of his profession and devotion to duty while Second in Command of a Guardia patrol from 20 September to October, 1932. This patrol of two officers and forty men penetrated one hundred miles north and east to Jinotega City, Department of Jinotega, Nicaragua, into isolated, mountainous bandit territory with no means of communication and no base nearer than Jinotega City. On 26 September, 1932, the patrol was ambushed northeast of Kilande Mountain by an insurgent group of over one hundred and fifty, armed with not less than seven automatic weapons, grenades, bombs, various classes of small arms, and plentifully supplied with ammunition. Gunnery Sergeant Lee was wounded twice and became unconscious in the early stages of the combat. After a period of from fifteen to twenty minutes he recovered consciousness, and in spite of his weakened condition, with disregard of his personal safety he moved the Lewis Machine Gun to a better fire position, used it with destructive effect, resumed his duties as Second in Command, and went forward in the final attack on the enemy position. The additional fire power of the Lewis Machine Gun from its new position as well as the leadership and example set by Gunnery Sergeant Lee were largely instrumental in gaining a signal victory over the enemy."

For the President.

CLAUDE A. SWANSON,
Secretary of the Navy.

The Secretary of the Navy has addressed Special Letters of Commendation to the following officers and enlisted men of the Marine Corps for the services hereafter noted:

CAPTAIN HAROLD C. MAJOR, U.S.M.C.

For distinguished service in the line of his profession as an airplane pilot attached to the Aircraft Squadrons, Second Marine Brigade, operating against hostile bandits in the Republic of Nicaragua from 9 June, 1931, to 15 December, 1932.

FIRST LIEUT. PAUL A. PUTNAM, U.S.M.C.

For extraordinary achievement in aerial flight as an airplane pilot attached to Aircraft Squadrons, Second Marine Brigade, operating in the Republic of Nicaragua.

SGT. THEODORE M. STEPHENSON, U.S.M.C.

While serving as a Second Lieutenant in the Guardia Nacional de Nicaragua he successfully commanded and personally led a rescue patrol which penetrated the jungle of south-eastern Nicaragua for a distance of forty miles and rescued officers and enlisted men of the Aircraft Squadrons who were forced down in the jungle and lost for a period of nine days without food or supplies.

MAR. GUNNER ALBERT S. MUNSCHE, U.S.M.C.

For distinguished service on the line of his profession as an airplane pilot while attached to Aircraft Squadrons, Second Marine Brigade, operating against hostile bandits in the Republic of Nicaragua from 29 April, 1931, to 15 December, 1932.

1ST LT. WILLIAM D. SAUNDERS, JR., U.S.M.C.

For distinguished service in the line of his profession as an airplane pilot attached to Aircraft Squadrons, Second Marine Brigade, operating against hostile bandits in the Republic of Nicaragua from 9 June, 1931, to 15 December, 1932.

PRIVATE STARWOOD S. MEREDITH, U.S.M.C.

For the rescue of Private E. R. Müller and the effort to rescue Private C. N. Grubbs from death by drowning in the surf at Ponaloya Beach, Nicaragua, 7 September, 1930.

PRIVATE RALPH L. SPENCER, U.S.M.C.

For heroic daring in saving the life of Private George M. Beattie from drowning on 8 January, 1933, in San Diego Bay.

HAIL, HAIL TO ROOSEVELT

In the last issue of THE GAZETTE appeared an illustration depicting the visit of Assistant Secretary of the Navy Franklin D. Roosevelt to the Fourth Marine Brigade on the West Front in France in August, 1918. In this connection it is interesting to note that a Marine serving with the Fourth Brigade at that time commemorated the occasion by writing a march in honor of the distinguished visitor, who gave the members of the Brigade a stirring message before they went forth to battle against the German foe. This march and song was written by Horace Talbot, then serving in the Fourth Marine Brigade, Second Division, A. E. F., as a Provisional Second Lieutenant. The march was also played by many of the bands which furnished the music for the Inaugural ceremonies of President Roosevelt on March 4, 1933. Chief Marine Gunner Horace Talbot, U.S.M.C., is now serving at the Marine Barracks, Quantico, Va., and was present at the inaugural ceremonies to hear his music played for the second time in honor of Franklin Delano Roosevelt.



Navy Cross
Star

• BOOK REVIEWS •

BLACK BAGDAD, by John H. Craige. Published by Minton, Balch & Company, 2 West 45th Street, New York. Price \$3.00.



Under this highly descriptive title the author recounts the Arabian nights adventures of a Marine Captain in Haiti. During the past eighteen years that have marked the duration of the present Marine occupation of the Republic of Haiti many "Marine Captains" have seen service there and doubtless all of them have had adventures that would be well worth recounting, but it has required a John Craige with his rare background of experience in many lands, his keen insight into human nature

and his facile wielding of a magic pen to make a record of such strange adventures in the modern Bagdad which is the mystical (almost I said mythical) black republic.

In the days when the great Napoleon ruled Europe and dreamed of ruling the world Haiti was ruled by France, white French over lords lived high and ruled widely while the black slaves imported by the ship load from their native African haunts performed all the labor that brought riches to France from this tropical land of plenty. One of Napoleon's generals who had returned from a campaign in Haiti was summoned before the great chief to report and Napoleon asked him, "What does Haiti look like, my general?" The general took a piece of stiff writing paper from the table and crumpling it in his hand dropped it on the table and replied, "Like this, Sire." And Haiti with its rugged verdure clad mountains and deep valleys with wide fertile floors shows the crumpled surface today as it did in Napoleon's day.

The black slaves rose in fury under the leadership of Toussaint l'Ouverture and murdered or drove to other lands their white masters and for more than a century since then Haiti has been a land "where black ruled white," an experiment in strange forms of government, sometimes under a self styled Emperor or King, sometimes under a dictator rising to power by right of might, sometimes under a so-called President who held short sway over the unruly populace until an assassin's hand laid him low. Forced to bring order out of unbearable chaos the United States government in 1916 sent the Marines into Haiti to put down disorder, reestablish orderly government, teach the people sanitation and the value of good roads, and train a native constabulary that would be able in time to take over the reins of control when the Marines should reembark and sail away for home or some other land of disorder in need of the guiding hand.

In Black Bagdad the author tells how in due course of his duty as a Captain of the Line in the U. S. Marines, pioneers and "trouble-shooters" in the lands where the "interests of the United States or the safety of its citizens and the conservation of their property" required the application of the "Big Stick" or the palliative treatment of a rejuvenation of law and order appeared to be the answer to the diplomatic diagnosis, he found himself a high officer of the Garde d'Haiti virtual ruler over the destinies of half a million dark-skinned natives who called him "Papa Blanc." From there, inland in Haiti surrounded by natives very near to the primitive, he was called to the capital of the Republic to take over the arduous duties of Chief of Police of Port au Prince, the "Paris of the West Indies," the "Black Bagdad" that gives title to his story.

The story, told in an inimitable manner, with a touch of Poe, a dash of Balzac and a flavoring from the oft told tales of Scheherezade, carries the reader through a maze of weird magic, surrounded by the dire curse of Voodoo, from one adventure to another, seemingly impossible in this year of Our Lord nineteen hundred and thirty-three, yet palpably convincing, and everywhere the drums, always the drums that carry their tale of joy or disaster today in Haiti as they did a thousand years ago in central Africa. Through the pages roam the Papa Loi and the Mama Loi, the wild dance keeps pace with the throb of the wilder drum beat, the deadly *wanga* brings sickness and death by magic in which we do not believe but which we fear none the less, and the ghostly *Zombie* stalk along like death's heads at the feast.

Captain John Craige, my friend of many years, has told a fine tale and the tale has suffered none from the telling by a master. Take up BLACK BAGDAD, by the fireside at night when the curtains are drawn and the lights are softly glowing, or on the porch this summer on vacation away from the city and its cares. Take it up and read the first page and I assure you that the book will be willingly laid down only after the last page is turned, and then will remain glowing memories. To you who have served in Haiti with the Marines memories reminiscent of mountain trails and tree clad mountains, open market places with the ground beaten smooth by the bare feet of natives, dancers weaving before the fires at night as the drums beat on—and on.

"The best book yet written on Haiti" is the verdict rendered by an old general of Marines, by a veteran sergeant who has served with the Marines "here and there" in a dozen bush wars, and by a seasoned American globe trotter who once paused for a time to "see the sights" of Haiti.



INEVITABLE WAR, by Lieutenant Colonel Richard Stockton, 6th. Published by Perth Company, 393 Seventh Avenue, New York, 873 pages, 112 chapters, 51 illustrations, fully indexed and annotated. Price \$7.50.

After years of study and research and consultation with the leading authorities on the subject of military preparedness versus disarmament and pacifism the author of "Inevitable War" has given to the public of the United States especially and to the world in general an argument in favor of adequate defense that should be all convincing.

The author does not advocate war as a measure of government or advocate it as a policy of nations but with conclusive logic he shows that from the dawn of history to the present day war has been and is inevitable and that sometimes it may be not only necessary but beneficial.

Reviewing the claims of the pacifists of today he clearly shows that in this regard as in many others "there is nothing new under the sun"; that their arguments are dictated by hope for the millenium on earth and are not justified by historical precedent nor by human nature as applied to nations as well as to individuals. From his studies he concludes that the basic causes of war are irremovable and that a League of Nations or a World Court can not prevent the occurrence of war in the future as in the past.

The first chapter of the book opens with a quotation, "We are mad, not only individually but nationally. We check manslaughter and isolated murders, but what of war and the much vaunted crime of slaughtering whole peoples? Cruelties are practiced in accordance with acts of the Senate and the popular assembly and the public is bidden to do what is forbidden to the individual."

To the readers these words appear familiar, modern and pacific; they may have been uttered by any leading peace and disarmament advocate of today. Yet they were proclaimed so long ago as four years before the advent of Christ on earth and were from the voice of Seneca, a leading pacifist of that date. From then on down to the present the author quotes the opinions of the misguided pacifists of other eras as

well as of the present day to prove that as each such opinion was proclaimed to show war impossible it was inevitably followed by a war that found at least one side to the strife unprepared.

With particular application to our own country Colonel Stockton reviews the military and political history of the wars in which we have engaged, from the Revolution to the World War, and shows that in each and every case, the advent of hostilities found the United States unprepared, a condition which increased the cost immensely in money and in the lives of our soldiers and sailors, unduly lengthened the period of war and lessened the beneficial results of victory.

From Washington to Hoover he studies the written and spoken testimony of the Presidents of the United States as to the value of an Army and a Navy adequate to meet the exigencies that may arise in the proper defense of the country against any foreign foe, showing that whatever may have been their shortcomings as to execution and the production of tangible results their oral testimony left little to be desired by the advocate of national preparedness.

In one chapter he recounts a prophecy as to the nature of future war with its use of new weapons, aircraft, noxious gases and other means of disabling an enemy people, and he demonstrates that in the past an increase in the deadly nature of the weapon has not resulted in an increased percentage of casualties in battle, but quite the contrary.

While the book treats in the main of armies and land warfare the Navy is not entirely neglected in the studies of the past and the application of the lessons derived therefrom to the problems of the future.

The book is well worth the careful study of the soldier or the sailor and of the political student as well, and it should become a standard book for use in the military and naval schools and colleges and also in the libraries that are frequented by the citizen who would learn from competent authority the vital needs of his country in peace and war.

From a careful perusal of this notable book we have no hesitation in heartily recommending it to our readers for study and also for future consultation as outstanding authority.

NOTICE

[N the files of the Marine Corps Association at the Headquarters of the Marine Corps the following numbers of the Marine Corps Gazette are missing:

SEPTEMBER, 1916.

MARCH, 1917.

DECEMBER, 1916.

SEPTEMBER, 1918.

The Association will be pleased to receive any of the above-mentioned numbers of the Gazette which members may have in their possession and desire to contribute to the Association to complete the files.

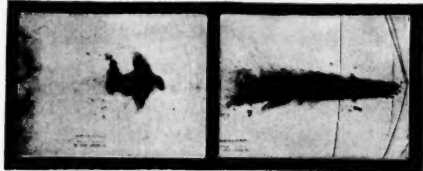
For the first of each of these numbers received the sum of \$5.00 will be paid.

Communications regarding this subject are requested by the Editor, Marine Corps Gazette, Headquarters Marine Corps, Washington, D. C.

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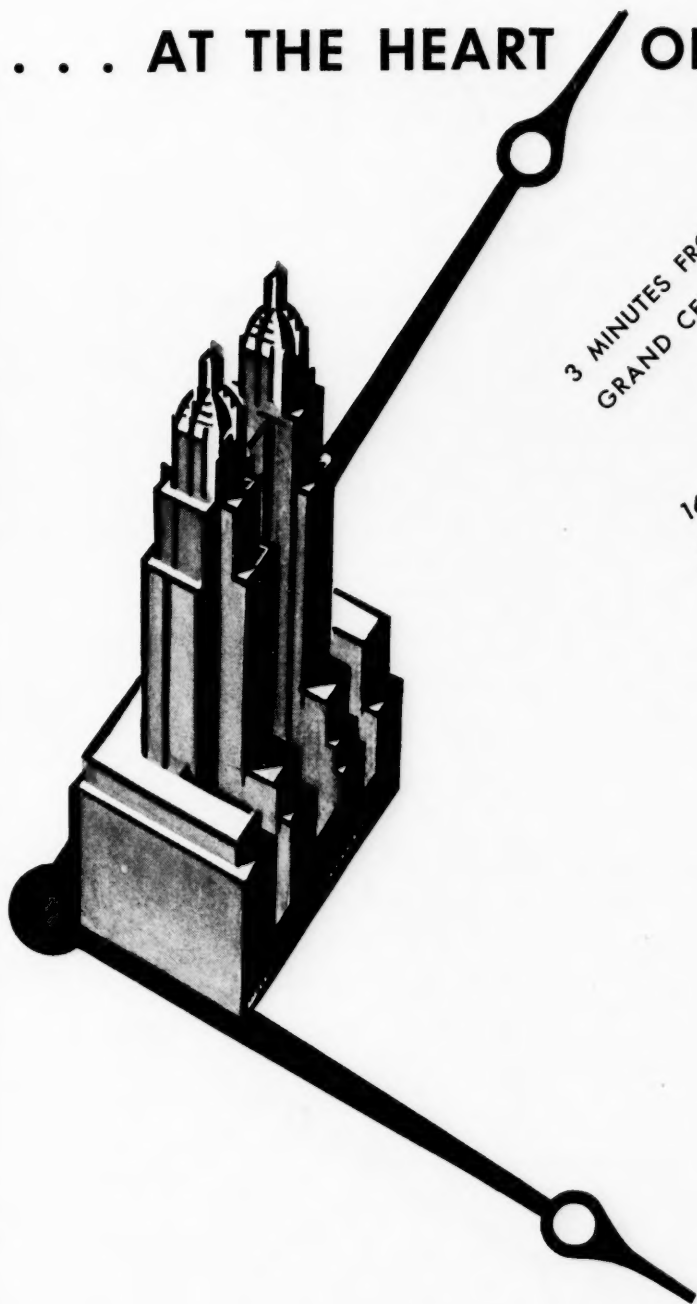


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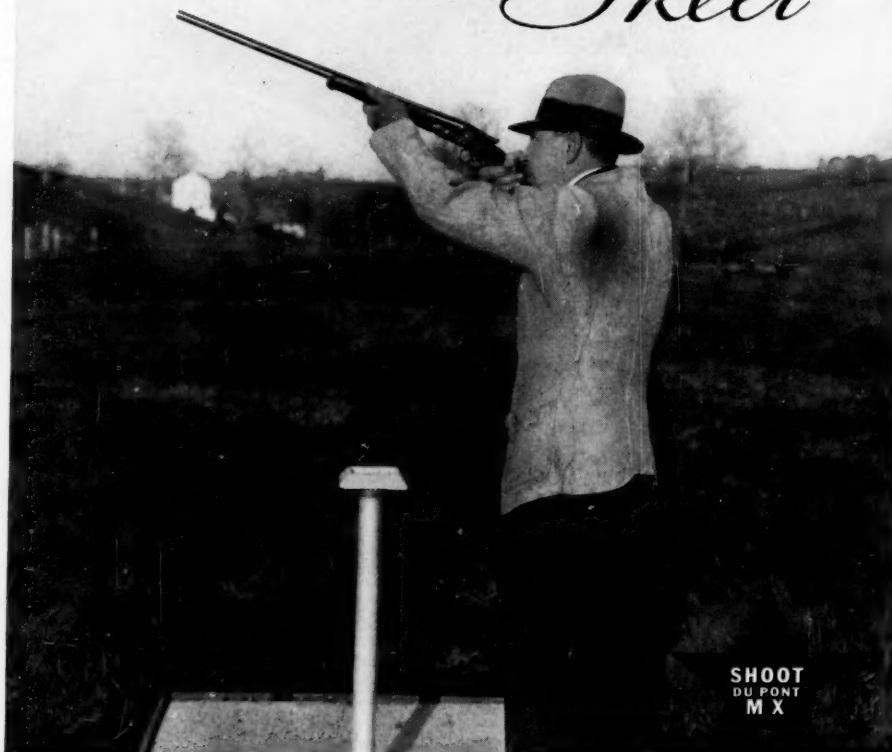
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